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## THEORETICAL AND PRACTICAL PROBLEMS OF ECONOMIC GROWTH

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Theoretical and Practical Problems of Economic Growth

Introduction

The Resolution dealing with Economic Development and Anti-cyclical Policy (Document E/CN.12/194), approved by the Commission during its Third Session at Montevideo, recommended that the Economic Commission for Latin America should pursue the studies presented to that Session "paying special attention to problems of economic development". The same Resolution "recommended to the Latin American Governments that they determine the specific goals of economic development and establish an order of priority for their realization."

This study of some of the problems of Economic Development is submitted in fulfilment of this assignment. The theoretical interpretation of these problems is essential in order to arrive at practical solutions, particularly with regard to programmes of development, the planning of which must be discussed in the light of the goals mentioned in the Resolution. Hence the necessity of studying them from both the theoretical and practical standpoints, as has been done in this analysis.

In addition to the four chapters into which it is divided, there are others in preparation concerning the process of savings and investment and the relationship between inflation and economic development in Latin America.

This work has been inspired by the sole object of presenting elements for the consideration of these problems. After further clarifying and strengthening the ideas implanted in the course of this discussion, they will be set forth in their final form for the Fifth Session of the Commission.

Raúl Prebisch  
Executive Secretary

## CHAPTER I

## REFLECTIONS ON SOME ASPECTS OF ECONOMIC DEVELOPMENT IN LATIN AMERICA

I Two types of economic developmentCharacteristics of the two types of economic development

1. The ideas recently set forth in two official reports of the United States Government, <sup>1/</sup> following upon others which some time previously had determined the programme of technical cooperation contained in Point Four, constitute an impressive summation of the trends of thought frequently expressed at international gatherings, especially during the sessions of ECOSOC and in the documents submitted for the Council's consideration. These ideas are of the utmost importance in this Continent because they bear out the fact that the country that can exercise the strongest influence on Latin American development is now engaged in drawing up a programme of international economic cooperation that is commensurate with the magnitude of the problems encountered.

These ideas imply the tacit acknowledgement that present-day problems are different from those encountered in the past, and that therefore a firm and definite policy is required for their solution in the under-developed countries as well as new patterns of relationships between these latter and the more advanced countries.

The differences between the present type of development and that of the past become sharper when the features of this process are compared with the economic phenomena of the last century and the early years of the present century. There is no well-defined dividing line between the two periods. In some of the Latin American countries the present form of development began long ago, stimulated by the dynamics of their own economies, whilst in others, it began more recently. However, in

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1/ Report to the President on Foreign Economic Policies (Gray Report)  
Washington, November 1950.

Partners in Progress. A Report to the President by the National  
Development Advisory Board (Nelson A. Rockefeller, Chairman) March  
1951.

every case <sup>1/</sup> external factors such as World Wars and the Great Economic Crisis contributed to creating or intensifying the process of development and progressively implanted ideas of development. These ideas do not spring spontaneously from the minds of economists and statesmen; their origin is in the vital impulses which exert a powerful influence on the course of events. Nevertheless, when they acquire greater precision and consistency, these ideas may be of great consequence, since they will give rise to guiding principles for practical action, deliberately steering the course of events so as to fulfill the fundamental aims of economic development.

These two types of development differ in their objectives, in their scope, and in their methods of procedure. In the past, development was principally concerned with the primary goods required by the great industrial centres, whilst it is now concerned with raising the level of consumption of the countries in which this process takes place.

Formerly, exports were the means of obtaining a variety of manufactured imports, whereas now they are used to achieve the progressive development of domestic production. Advanced productive technique was generally limited to those occupations which were directly or indirectly connected with exports, whilst at present an attempt is made to extend technical progress to every branch of economic activity, in order to increase the level of consumption by adopting the productive methods of the more highly developed countries. The earlier process of development was limited to the areas closely linked with the exchange economy of the world. It was not, therefore, a phenomenon affecting large masses of the population, except when it involved substantial international migration. Modern economic development embraces increasingly large sectors of the population and extends the latest productive techniques to both primary production and to occupations with a low level of productivity, in which a large proportion of the

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<sup>1/</sup> The case of Venezuela should be considered separately, since it still reveals most of the characteristics which marked the development of other Latin American countries during the early decades of the present century.

gainfully employed population is engaged.

This substantial extension of the process of economic development places a great strain on investment. The more highly developed countries invested capital in primary production in the under-developed countries in order to satisfy more economically their own requirements. Nowadays, however, the greater part of the capital invested must be supplied by savings within the countries which are in the process of development so as to raise the level of consumption of the mass of the population. Formerly, foreign capital was the principal source of investment but it is now merely supplementary, though of considerable importance. The principal social groups thus avoided the necessity of investing in export activities and were able to use their substantial income in consumption, adopting the standard of living of the great centres. By this means, there was a progressive extension of the culture and refinements of European civilization, which permeated very slowly through the deepest and innermost layers of everyday life. Now, however, the pressing need for investment in domestic activities is often incompatible with the effort to introduce into under-developed areas the higher standards of living of the more advanced countries, among which the United States evidently figures. These standards of living, and the kinds of consumption which they involve, as well as the structure of investment, are the natural outcome of the high income level gradually achieved in those countries by the increase of productivity. Their mere transference to the under-developed countries, without a deliberate effort of selection and adaption, causes strains which in the past had no reason to arise. At that time, in addition to the fact that the principal social groups did not bear the heaviest part of the burden of investment in production for the international market, as has just been pointed out, they lived comfortably within a political, social and economic community in which the mass of the population had not acquired the cogent influence which they have gained with the passing of time.

The present characteristics of economic development have brought about significant changes in the traditional relationships between the more advanced and the under-developed countries. Some of these

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alterations may be clearly perceived, whereas others remain undisclosed, though the course of events suggests the possibility of still other modifications. The changes which are occurring, or which might ensue, affect the structure of foreign trade, the type and direction of investment, and the extension of modern technique from highly advanced countries to under-developed areas.

## II Changes in the relationships between the more advanced and the under-developed countries

### Changes in the structure of foreign trade

2. We shall take up first the changes in the structure of foreign trade. In the next chapter, following up the ideas set forth in the Economic Survey of Latin America 1949, an attempt will be made to show that economic development imposes changes in the structure of imports as income increases, and that, in order to increase income, it is necessary to replace certain imports by domestic production, so that the volume of other imports may be expanded. This does not involve a concept of self-sufficiency, nor of pursuing a systematic reduction of imports; instead, it implies importing as much as exports and foreign investments may allow. It should be pointed out, however, that the import schedule must be drawn up so as to stimulate and not delay economic development. The likelihood of growth is otherwise extraordinarily limited, though the possibility of increasing exports adequately must by no means be overlooked.

The great industrial countries are recognizing the need to modify the structure of their exports to under-developed countries, just as the latter have had to do on more than one occasion with their own exports, as a result of changes in technique, consumer preferences, or trade policies in the former. In making these readjustments, serious difficulties are encountered: these can best be solved by attempting to analyze and understand the nature of their causes.

Assuming that a country in an active phase of development needs to stimulate the production of substitutes in order to continue its growth, it will inevitably be compelled to dispense with certain imports which might perhaps correspond to those exports which industrial countries are

/most interested



most interested in increasing. However, if there are no other means of solving the problem of development and if the country that is attempting to replace imports by domestic production can offer, in compensation, a growing market for other goods which the exporter country produces or might produce, the problem, though not easy, may be solved with the help of goodwill and imagination. Thus, the analysis of the import tendencies in Latin American countries, in terms of their requirements for economic development, and the probable effect of these tendencies in the future, is not only important in drawing up programmes of economic development, as will be shown elsewhere but it is also important to the plans of exporter countries since they will be guided in placing investments in export industries and in the changes which it would be advisable to introduce into these industries.

There are other instances in which the under-developed countries may seek to reduce or suppress certain imports, though not with a view to domestic production of substitute goods, but in order to do without them insofar as possible in order to increase imports of essential goods. This point is closely connected with other considerations analyzed hereunder. There are certain kinds of consumption, both of foreign goods and of goods produced by domestic industry, which it would be advisable to discourage if investment is to be stimulated. A clash of interests might conceivably occur on matters related to foreign trade, but careful analysis of the position and of development requirements would probably offer the means for a satisfactory solution.

There is still a third case, in which a country, because of the relatively large amount of foreign exchange required, is compelled even to limit imports of goods which are essential for economic development. This is a more complex problem, the best solution for which would not lie in limiting imports but in adapting the type of goods to the lower purchasing power of the under-developed countries and to their very substantial investment needs. Whilst acknowledging the difficulties involved in the analysis of these cases, it has been deemed advisable to consider them in the last chapter of this report.

There is an aspect of the relations between the more advanced and the under-developed countries which was not encountered in earlier periods of economic development. The Latin American countries will have to invest substantial amounts in order to hasten economic development and will inevitably have to import a large proportion of the capital goods and other products needed for industrial and agricultural production, together with the essential and irreplaceable consumer goods which they require. In these circumstances, one might well inquire whether the need to increase essential imports can always be reconciled with the demand for other imports which, while not superfluous, are far from essential. Moreover, the demand for these goods is systematically and constantly stimulated by every means of collective suggestion or persuasion available to modern advertising, which will assuredly include television in the near future. Thus certain kinds of consumption, if not standards of living, which are only compatible with the high level of income of the more advanced countries, are nevertheless penetrating into every class of society. This, of course, includes new types of goods or improved products, created by technical progress in the more highly developed countries, with a view to meeting present needs or to creating new demands. The importance of these goods in a higher standard of living such as that to which the Latin American countries aspire, can hardly be denied. Yet to reach that standard of living, intensive investment is required; certain premature habits of consumption undoubtedly hinder the increase of investment and delay the achievement of its objectives.

All these problems must be considered from the standpoint of the demands of economic development. There is reason to hope that by cooperating in the development of the backward countries, those which are more advanced will facilitate the progressive modification of the structure of foreign trade (essential to the growth of the periphery), which must be effected with a minimum of dislocations and with a reciprocal understanding of the interests at stake.

One of the aims of this transformation is the development of trade between the Latin American countries, but this has rarely been achieved, and then only provisionally and fortuitously. The repetition of the

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considerations regarding this subject set forth in the aforesaid Economic Survey would be redundant. It is important, however, to stress that specialization in certain forms of industrial production and the consequent reciprocal trade arising therefrom, would obviously be desirable. There are, however, several serious drawbacks to this. The difficulties encountered in Latin America, in developing reciprocal trade of manufactured goods, in the face of competition from the great industrial centres, where efficiency and productivity levels are much higher. Each of the Latin American countries therefore finds itself obliged to produce all of these industrial products which, because of its limited capacity to import, it cannot acquire in the larger centres. The present emergency, by laying open the critical points of Latin American development, may perhaps encourage a serious study of these possibilities.

#### Changes in foreign investments

3. Let us now consider the influence of the new forms of economic development on foreign investments. The widely recognised effects of the world economic crisis on the international capital market were largely responsible for the decrease of the traditional flow of foreign investments to under-developed countries. However, the deep-rooted change in the process of economic development, which was intensified by the crisis, has undoubtedly restricted the field of investment in established export activities. Foreign investments are now preferentially called upon to develop domestic activities. Instead of expanding exports they tend to reduce imports, even when there is no intention of neglecting the former. However, for a number of reasons which it is not pertinent to discuss now, private capital of foreign origin has been slow in responding to this new trend of investment. This may be seen from the fact that, during the past twenty years, the proportion of private investment in industrial development and other domestic activities in Latin American countries, has been extremely low, even in relation to the scanty total investment.

Meanwhile, institutions have been organized which are becoming increasingly active in financing certain domestic undertakings by means of loans to the Latin American governments or loans guaranteed by these governments. There is a large field for such loans, especially when they /can be utilized in

can be utilized in the execution of wide programmes of economic development. There is, however, a growing feeling that these sources of international financing should be directly accessible to private economic initiative in Latin America. Industrial credits are not so much limited by the absence of adequate organization as by the relative lack of funds for medium and long-term loans. In fact, most of these countries have a good commercial banking organization, and there are a number of reliable and experienced establishments which have been cooperating with industry for some time, and which have contributed greatly to its development. These, however, have encountered insurmountable difficulties as regards both the amounts and terms of the loans because of the shortage of funds. Here then, is an interesting field for international cooperation which has begun to draw the attention of those in a position best suited to take action. This does not apply to agricultural credits, since the evident shortage of funds is generally aggravated by the limited number of organizations which are adequate to meet the real needs of agriculture, with the exception of a very limited number of Latin American countries, which are exemplary in this connexion. There are certain important considerations in favour of a combination whereby the experience of a country could be pooled with that of other countries in order that a part of the resources required by Latin American agriculture may be supplied by international capital. These funds would be used as fixed capital and to meet the pressing need to increase working capital, thus enabling these countries to adopt methods of cultivation that would speedily raise the level of productivity. This would naturally imply the floating of international loans, not only to cover imports of capital goods, but also for the purely domestic part of the investments, which might otherwise be considered inadvisable for a number of reasons. There is, however, the possibility of combining these operations, by making use of the exchange not required for the aforesaid domestic investments in order to import other capital goods.

This type of solution might well encourage private initiative in these countries without affecting the loans that must be obtained through official channels. There remains the problem of private foreign capital and its reluctance to invest in Latin America. It is necessary to

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stimulate such investment, not only because of the funds involved, but also the technical assistance which it entails, and the extension of the know-how which is so badly needed in these countries. The finding of a solution is not easy, though some attempts at joint enterprise in Latin America (domestic and foreign private investments in industrial enterprise) suggest potentially greater possibilities of finding a satisfactory solution for the difficulties arising from double international taxation and exchange controls and point to other opportunities in which experience may indicate the adequate formula for mutual understanding.

The need for adapting productive technique

4. It is generally recognized that every means must be used to increase the volume of international investments in Latin America. Be that as it may, its role in economic development must perforce be secondary, domestic investments having held the leading position since the world crisis. No reliable estimates have been made of capital requirements in Latin America in relation to the rate of development which might be obtained, given the resources, the growth of the gainfully employed population and its displacement, the expansion of primary production and of other occupations with a lower level of productivity than industry, or other activities. However, the figures are undoubtedly higher than those recorded during the past twenty years, during which the replacement of equipment has been seriously retarded in several important sectors. Reference has just been made to the need for increasing foreign investments; later the domestic measures required to intensify domestic investment will be considered. More remains to be said, however.

There is one aspect of the problem of investment which had no cause to arise during the process of economic development in the past, and which only becomes evident when modern technique and the investments necessary for its application are extended to the whole economy. At this point, a relationship emerges between available capital and the gainfully employed population requiring it, which is different from that encountered in the great industrial centres, where capital is relatively  
/abundant and

abundant and labour relatively scarce. The opposite occurs in the under-developed countries, in which only a minimum amount of capital and a low level of productivity are accessible to a considerable proportion of the population.

Technical progress in the highly industrialized centres, and especially in the United States, has tended to develop a technique which, though it involves a substantial capital investment, achieves considerable savings in labour and increases production per unit of capital. There has thus been a progressive expansion of capital investment per gainfully employed person. It is evident that if the under-developed countries could make use of the required savings to assign a capital investment per gainfully employed person equivalent to that of the more advanced countries, they could obtain the same forms of production as in the large centres (once the necessary skill had been developed). This cannot occur, however, because of the relative shortage of capital. To what extent is it justifiable to transfer to under-developed countries the more advanced methods progressively acquired by the industrial centres as their real per capita income increases? In view of the abundant labour supply, limited capital resources and the low productivity level of the Latin American countries, their scanty funds should be used, as is shown in Chapter III, to increase production as much as possible, only making allowance for such reductions of labour consumption as can be reabsorbed by the capital available to offer full employment. As occurred in the great industrial centres, in the course of time, a stage will be reached in which, once technical progress has been extended to the majority of labour, it will be necessarily preferable to invest larger amounts of capital per gainfully employed person in order to economize labour costs. However, until this phase has been reached, (and this will not be for some time to come), if an exaggerated proportion of capital is invested in order to economize labour, it is, in effect, wasted. Equipment is unfortunately indivisible as a rule, so that countries in which there is a shortage of capital are unable to take advantage of the most expedient combinations of investments which reduce labour consumption and those which increase production per unit of capital.

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Consequently, modern technique must be adapted to these countries, and not merely transmitted to them. The Latin American countries would benefit greatly from the results of technical research directed to formulating methods of increasing production per unit of capital, and combining these with others that would enable the necessary reductions in labour consumption to be made. Here then is still another field for useful cooperation between the more advanced and the under-developed countries.

### III Towards an Effective Policy of Development for the Latin American Countries

#### The standard of living during the present phase of growth

5. We will now consider measures of a domestic order which the Latin American countries themselves must take in order to hasten the rate of economic growth. These measures are of vital importance, since development must be fundamentally the task of the countries themselves. Their capacity to grow is shown by the course of events between the crisis and the Second World War; with a minimum of foreign capital investment and the unfavourable terms of trade that constituted serious drawbacks to imports of capital equipment during the 'thirties and despite the serious difficulties that arose during the Second World War, the Latin American countries stimulated their industrial development considerably.

A glance at the events of this period also indicates that in order to raise the standard of living substantially for the mass of the population, and in order that it should reach the level obtaining in the great centres, economic development must take place at a higher rate than heretofore. The effort of domestic investment and the assistance of foreign investments must both be greater, and other supplementary measures will also have to be taken.

The mere comparison of the standard of living in the more advanced with that of the under-developed countries may tend to conceal a phenomenon which occurs in the latter as the result of the stage of development reached. With few exceptions, there does not appear to have been any marked change in the way of life of Latin American industrial centres during the past twenty years. However, the average standard of /living in each

living in each country and the per capita total of available goods have both increased significantly. The explanation for this is simple. The population migrates from occupations in which income is low to others where the level of real income is higher, thus raising their average income and standard of living, even though the standard of living in the higher income groups is not substantially greater.

This phenomenon is characteristic of the under-developed countries. They are under-developed precisely for the reason to which frequent reference has been made, namely, that a large proportion of the gainfully employed population is working under conditions of a shortage of capital, low productivity levels in primary production and other activities in which labour costs are low. Until modern technique can be extended to these persons, thus modifying the nature of their occupations and progressively decreasing the disparities of productivity and income, the prevailing pattern of development will be maintained. Large amounts of capital will be required in order to effect this displacement of labour, at the cost of the possibility of intensifying the use of capital. The consequent raising of the standard of living is more likely to be the result of such displacement than of an absolute improvement of the standard in search of which they migrated. Once this stage of development is reached and modern technique is assimilated in the various branches of economic activity, development may acquire the intensive characteristics of the great industrial countries. The increase of average productivity may only be obtained by a more intensive application of capital in order to economize labour and thus increase its productivity, as was shown above. The expansion of capital will only be required in order to employ the natural (or migratory) increment of the gainfully employed population. This would appear to be the stage of development now reached by Argentina.

The shortage of capital accounts for the low level of productivity of the great mass of the population. The investment of capital in this sector is characteristic of the extensive form of development that requires such vast funds. The rapid growth of the population, which has expanded markedly in several of the Latin American countries,

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constitutes a further drawback. The spread of public health and sanitary services has lowered the death rate, especially that of infant mortality, but no other reactions have yet been observed tending to decrease the birth rate, though these are evidently far slower in making themselves felt. Meanwhile, this greater increase of the population augments capital requirements. All these aspects of the problem are conducive to a discussion of the possibilities of increasing investments in the Latin American countries.

The system of taxation from the point of view of economic development

6. The conviction is growing progressively that there is little possibility of stimulating economic development persistently by means of inflation. Undoubtedly a number of Latin American countries have been able to expand investments effectively during certain phases of inflation. However, sooner or later, consumption will react and this form of investment cannot be pursued for long. Moreover, frequent regressions must occur in view of the characteristic disturbances of the inflationary process. The social cost of this form of investment is very high, since the increase of investments is achieved by raising the revenue of the high income groups through inflation and the disproportionate growth of these groups, also involving a substantial increment in their superfluous consumption.

Hence the tendency, not as yet widely adopted, of utilizing taxation in order to encourage private investment, to the detriment of consumption, or to increase the resources available to the Government so that it may intervene directly in investments. No systematic analysis of Latin American systems of taxation has yet been carried out from the standpoint of economic development. Fiscal requirements prevail, from the outset, and thus funds which are invested or spent are taxed identically under income tax legislation. Often, when inflationary profits are taxed no account is taken of the proportion which corresponds to the consumption of capital.

It is perhaps difficult to draw a dividing line between the taxes on income, and it is preferable, in practice, to apply a direct tax on certain forms of consumption in the higher income levels. Among the specific

/forms of such

forms of such consumption figure certain characteristic imports, but in some cases, when such imports have been restricted or prohibited in order to avoid external disequilibrium, substitute products have been produced by domestic industry, which have diverted capital that, from the social standpoint, could be more usefully invested elsewhere. This has led to the need for internal taxes to restrict these forms of consumption and stimulate better utilization of the available capital. Reference is usually made to the practice of luxury building, frequently encountered in many Latin American cities. Undoubtedly, during the war, in the face of the difficulty of importing capital goods, this type of building absorbed substantial funds which might otherwise have been applied more productively were this possible. Apart from this adventitious expansion, there can be no doubt that this is one of the indications of inflation that should be carefully studied and one in which taxation might bring substantial economic and social benefits.

If taxation could be used to discourage certain types of consumption and stimulate investment, it is quite likely that the proportion of productive investments in relation to national income could be raised one or two points. This is purely conjectural and no valid conclusions can be drawn until a detailed analysis of this subject is carried out.

In order to hasten productive investment, it is essential to obtain the co-operation of the mass of the population. In the last resort, it is the mass of the population that, according to the greater or lesser capacity of the different groups comprising this sector to organize and protect their real income, has enabled an increase of investment and of inflationary consumption in the high income levels to take place. This often occurs at the cost of the real income which accrued to the population; at other times it tends toward a higher income obtained by this sector of the population in migrating to other occupations, as has already been explained by the increase of productivity or the raising of the family income as the result of the employment of a greater number of its members. Logically, it would be preferable for the mass of the population to surrender part of its real income, though retaining full ownership of such funds, diverting it to savings which would be used in

/productive

productive investment instead of being entirely deprived of it by the inflationary rise of prices. In practice, however, the problem is more complex, especially when inflation has caused a clash of interests which preclude solutions of this nature. Be that as it may, the deliberate co-operation of the masses in a movement of this kind is inconceivable unless attended by effective measures to limit consumption and increase investments in the high income groups.

The risk that an effort of this kind should fail, from the financial standpoint, constitutes an additional drawback. Whilst the system of taxation continues to stimulate private investment, this risk does not arise, but if it offers the government greater resources, the leading statesmen may be tempted to improve the standard of consumption of certain social groups and not to increase investments. Actually, taxation is a means of re-distributing income either directly or indirectly. There are certain forms of distribution of income which involve the rendering of collective services and which are of considerable social significance. The age-old dilemma of placing present expediency before future requirements, arises again. It is not always a question of economic motives, nor need these always prevail in the final decision. However, the establishment of priorities with a clear notion of their significance and their economic stability is, in any case, advisable. This will lead to the striking of a better balance between certain expenditures which, even if they are employed to cover immediate requirements, do not in any way raise the level of productivity, and investments that do raise its level and which can therefore, in a not too distant future, bring about an increment in real income and an improvement in the general well-being of the population. Hence the need to consider these problems in drawing up a programme of economic development.

Drawing this discussion to a close, the possibility of making use of taxation as a means of obtaining better utilization of the land in different Latin American countries should also be explored. Fundamentally, in order to increase the output of the land, productive technique must be improved and capital must be invested. However, the land tenure system constitutes in many cases the major obstacle which will have to be removed

/before such

before such measures can succeed. One of the most efficient means of achieving this objective could be the use of taxation, together with other more direct means which might prove to be advisable for the breaking down of the prevailing system.

In agriculture, as in industry, transport and other fields of economic activity, the problem of productivity is in the last analysis a problem of investment. The level of productivity cannot be constantly raised unless the amount of capital is likewise increased. However, such considerations should not exclude the use of immediate means of increasing productivity, through the improvement of working methods and the making of small direct capital investments. These investments would be required in other occupations, in order to employ the workers displaced by the increase in productivity. These measures are very important in Latin America and their introduction might be one of the most decisive elements in an integrated anti-inflation programme. Priority of attention should therefore be given to this aspect in the first stage of a programme of economic development. It may be well now to consider the need for such a programme.

The need for a programme of development

7. It would be incorrect to state that the Latin American countries require a programme to continue their economic development; nevertheless a programme is needed to enable them to attain a more efficient utilization of their domestic resources and also as a means of obtaining foreign assistance to accelerate their development. Though they have never drawn up a programme of this kind, many of these countries experienced a substantial development during the past twenty years despite the difficulties mentioned above and the recent World War. However, their growth has probably been less than what it might have been, had their available resources been applied more efficiently. Most of these Latin American countries have frequently been subjected to external disequilibria, (arising largely from their own growth), which might have been attenuated, if not avoided, by exercising a little foresight. Instead economic development has been retarded or halted in order to correct the disequilibrium. Moreover, development has not always been uniform, nor has there always been the necessary adjustment between different activities.

/Thus in some

Thus in some cases the expansion of industry has been hampered by the inadequate development of the sources of energy; in other instances the rest of the economy has suffered because investment in transport was neglected. In several countries the shortage of labour has hindered industrial development, even where it is abundant in primary occupations; this, of course, is because the necessary measures to ensure its mobility were not taken. On the other hand, there are also examples in which an excessive migration of workers to industry has led to a shortage of the labour required in primary production in order to maintain an adequate volume of exports. It is evident that the well-timed capital investments could have prevented that situation. Similarly, there are examples of the opposite phenomenon, that is, instance of over-mechanization of agriculture in regions where labour is abundant, when it would have been more profitable to increase the yield per hectare by better utilization of the land available, or by extending the area of cultivated land. Examples such as the foregoing are too numerous to be cited in their entirety; however, reference must be made to cases in which exaggerated emphasis has been placed on certain domestic activities, whilst disregarding the possible margin of profitable development in exports.

The absence of co-ordination between the development of various activities cannot solely be ascribed to the shortage of capital for adequate investments in each of them. It is obvious that the shortage of capital is the common denominator of all problems of economic development in Latin America. However, the greater the lack of available capital, the greater the need to apply it in such a manner as to obtain the highest possible increment in aggregate production. This is, of course, the fundamental objective of economic development.

Fortunately past experience has proved useful. The Latin American countries have increasingly recognized the need to draw up development programmes with a view to stimulating the most intensive growth of their economy, whilst avoiding the maladjustments which delay progress. This acknowledgment has constantly been supported by the policy of the International Bank for Reconstruction and Development, as shown both in  
/its published

its published documents and in its relations with Latin American governments, of encouragement of the latter to draw up those programmes so as to achieve a better combination of individual resources of each country with the supplementary funds contributed by this development institution.

A programme of development is not a mere series of individual plans to expand diverse industries or branches of economic activity. Each of these separate projects analyzed in isolation may be sound from a technical standpoint, but this does not necessarily imply that, taken together, they will constitute a good programme. Neither technical perfection nor the fact that the programme is a paying proposition is sufficient. It is also essential to ensure that these projects are the best solutions from the standpoint of the economic development of the country concerned. It is necessary to ascertain whether any alternative plan involving the same amount of investment would yield a greater increment to total production and, therefore, to aggregate real income. In other words, in order to draw up a programme of economic development, the various schemes for capital investment must be studied and the most advantageous selected in relation to the objectives desired. The programme must therefore be comprehensive, making allowances for all the investments required, over a reasonable period, for the economic development of a country. It is likewise essential to assess the reciprocal degree of compatibility between the different elements of the programme and other no less important aspects which will be discussed in another chapter.

8. This does not imply that in drawing up a programme of economic development, the State must extend its functions as an entrepreneur beyond what is required of it by other considerations. It is possible to formulate a well rounded programme, including the various branches of economic activity, in which State intervention would be limited to creating favourable conditions for private enterprise and exercising the indispensable incentives which will enable it to fulfil the planned goals. Alternatively, a programme may be drawn up which will place the State in a dominant position as an entrepreneur. It follows that

/acknowledgment

acknowledgment of the need for a programme of economic development in the Latin American countries is alien to the theoretical discussion of the degree of direct State intervention in economic matters.

As a matter of fact in the course of Latin American history, the State in several countries has influenced economic activity strongly though it has not fully exercised the functions of an entrepreneur. Customs tariffs levied for fiscal purposes or to ensure equilibrium in the balance of payments, exchange controls aimed at the same purpose, and other forms of taxation designed to stimulate or check certain types of investments, are the most frequent outlets for this influence, though a clear and explicit concept of economic development does not always exist; nor are these measures closely linked to other indispensable factors for an orderly and steady economic development.

Strong government influence in the development of economic activities does not therefore imply that a programme has been drawn up. If a programme is envisaged and not merely a series of disconnected and partial projects, it is necessary to make a general analysis of all these measures so that they may be made to correspond to the aims of development, without interfering with their specific objectives.

A programme involves establishing order, which implies the establishment of a well-defined and rational relationship between the means or resources available, the requirements of economic development, their order of priority and the different ways in which these resources must be used to ensure the fulfilment of the requirements of development. This type of programme is also an act of foresightedness, since it not only establishes this relationship in the present, but also investigates probable resources, requirements and the means of supplying them over a period which is sufficiently long to facilitate the attainment of the proper sequence of measures and projects which by their nature cannot be carried out simultaneously. These measures are nevertheless necessary in order to eliminate certain obstacles to the regular development of a country. However, this period should not be so long that forecasts of future trends become so indeterminate and uncertain as to prevent a rational combination of these elements.

9. Latin American countries have had little experience in this field. Yet it is sufficient to enable them to undertake the preparation of programmes, especially when international institutions (which are in close contact with the true economic reality of these countries and which have gradually penetrated more deeply into their problems of development) can be relied upon for assistance. It is therefore opportune to discuss in broad terms as will be done in the final chapter of this report the nature and contents of a programme, with a view to drawing certain useful conclusions for practical action. It is not proposed to enunciate rigid principles, but to outline methods of analysis and to define the implications of certain events established in order to define the aims pursued and to determine the most adequate manner and means of achieving them, within the bounds of the unity and continuity which are essential to the success of such a programme.

It must be kept in mind, however, that these are the first steps of a vast undertaking and that the methodology itself is still being formulated. The findings will have to be verified and meanwhile a judicious pragmatic criterion must be adopted. The objective analysis of the execution of the programme, the difficulties encountered therein and the means of solving them, will provide a source of new experience, on the basis of which the methods and principles of practical action can be constantly corrected and improved.

It is usual for those holding key positions in the field of practical action to be so absorbed by current affairs requiring immediate solution that they lack the time to systematize their experience, to compare it with that of others sharing similar responsibilities and to draw conclusions which may guide others in the consideration of similar problems, allowing the latter to profit with their errors and achievements.

Their experience is nonetheless invaluable and means must be found of utilizing it without impairing their current responsibilities. The Economic Commission for Latin America could perhaps become the ideal instrument for this purpose, utilizing the results thus obtained and /the knowledge of



the knowledge of Latin American problems obtained by its economists in the task of forming selected groups of experts in problems of economic development and in planning and carrying out these programmes. This problem is discussed in the last chapter of the report; the considerations contained therein should prove important in view of the marked shortage of such experts in Latin American countries.

A programme is the concrete form of putting a development policy into practice. Such a policy must be based on principles which will guide and give it consistency. The Member Governments of the Commission have shown considerable interest in discussing these principles and have recommended, in this connection, that the Executive Secretary should pursue the task begun at the Commission's Second Session in Havana, continued at Montevideo, and now summarized in this report for the Session in Mexico. Discussion and criticism of the work, as occurred in the past, will be a source of encouragement to proceed with, and improve these investigations on problems of economic development.

The consideration of such topics by the Commission will not only prove useful to the development policy of the Latin American countries, but it will also contribute to clarifying certain international aspects of the problem to which reference was made in the earlier part of this chapter. International action in the field of investments is also embodied in these programmes, to judge by recent events. The reason for this can be readily understood: the efficiency of an international investment policy depends on the correct assessment of development requirements and on the order of priority ascribed to them, since financial and technical resources are necessarily limited. A programme seems advisable so as to ensure a better means of distributing these resources.

#### The Possibility of an International Investment Programme

10. An international programme could only be drawn up if the interested countries have defined their own development requirements with a certain degree of accuracy, and assessed the supplementary resources required from abroad, in addition to the domestic resources available. From this point of view, an international programme must of needs be based on

/a series

a series of national programmes and, similarly, the essential feature of continuity which the latter must have depends fundamentally on the effective fulfilment of the former, that is, of an international programme. The relationship between the two programmes is of considerable significance.

The international responsibility of those concerned in a programme of international investments fully justifies both careful analysis of the investments in a country requesting this type of financial co-operation, and the need to embody the various sectors of economy in the programme in order to assess total investment requirements and the supplementary foreign capital to cover these requirements fully. The amount of foreign capital must be determined in relation to a specific programme and the annual grants made must be subordinated to the execution of the programme.

The relations between countries and international institutions making such investments will depend on mutual understanding of one another's viewpoints rather than on clearly defined rules and regulations, designed to meet all contingencies. The execution of a programme depends not only on the deliberate intention of carrying it out, but also on unforeseeable circumstances which must be met with a flexible criterion and with equanimity. It would be necessary to determine whether the difficulties encountered in carrying out such a programme arise, for instance, from having diverted capital intended for one item to other different uses, or whether a contraction in the volume of exports may have modified the estimates on which the programme was based. If, in the first eventuality, it were justifiable to reconsider the programme and decide whether or not to contribute international resources in view of the alteration, in the second case, an understanding attitude towards these difficulties, and the continuity of investments would undoubtedly strengthen the prestige of international action greatly, guaranteeing the fundamental concept of a programme of development in the Latin American countries.

Similar difficulties, from the international standpoint, call for the same spirit of understanding. If an international programme of investments existed at present, it would unquestionably involve a

/readjustment of

readjustment of the amounts previously established, and their adaptation to the real export possibilities of capital goods from industrial centres, since the maintenance of the same volume of investment would only intensify the inflationary pressure, which it is sought to attenuate. On the other hand, if an economic recession were being considered rather than supply shortages, the reduction of an investment programme would involve adverse consequences, not only to the prestige of international co-operation but also for the economic stability of the interested countries.

In examining this problem logically, it is essential to consider anti-cyclical policy. Much could be said for the continuity of an international programme of investments which remained unaffected by economic fluctuations. However, if the programme were sufficiently flexible to compensate certain effects of these fluctuations, its practical usefulness would be further enhanced. The importance of this point to economic development in Latin America cannot be over-emphasized.

Principles of a Policy of Development

11. One of the purposes of this report is the discussion of the contents of a programme of development. It was pointed out that the programme is the expression of a policy of development which must be guided by certain principles to be formulated after theoretical analysis. In the following chapter, therefore, an effort has naturally been made to analyse some aspects of the phenomena of development. The theoretical interpretation of these phenomena is not incompatible with the general conclusions of a concept which is still in evolution, but it is necessary to explain their characteristic occurrence in the periphery of world economy. Therefore certain instruments utilised in this analysis and applicable to the industrial centres cannot always be used successfully in the periphery, as we will attempt to show. Though all these theoretical explanations share this common objective, there is nevertheless an atmosphere of incoherence which can only be dispelled by analysing and giving consistency to these ideas. Hence their being included in this preliminary report.

## CHAPTER II. TECHNICAL PROGRESS, INDUSTRIALISATION AND DISEQUILIBRIUM

### Technical Progress in the Industrial Centres and Demand for Primary Products

1. In the interpretation of the process of growth contained in the Economic Survey<sup>1/</sup> of last year, several theoretical propositions were put forward which, because of their effects on the policy of development, must now be more fully discussed.

One of these propositions asserts that technical progress compels the Latin American countries (which make up a part of the world periphery) to resort to industrialization as a means of development. Another proposition holds that in this form of economic development there are certain inherent and persistent tendencies to external disequilibrium.

The origin of these tendencies to disequilibrium lies in the changes brought about by technical progress itself. These consist, on the one hand, in alterations of the productive methods and in demand and, on the other, in the distribution of the gainfully employed population in order to meet such demand within each country and within the sphere of world economy as a whole.

The elimination of external disequilibrium is essential to the achieving of a regular and orderly form of economic development. Thus far, the Latin American countries have sought to correct disequilibrium once it occurs, at a considerable cost, as may be deduced from the experience of the past twenty-five years. However, this experience provides valuable lessons in the means of avoiding the phenomenon, or, alternatively, of attenuating it, if it cannot be circumvented.

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<sup>1/</sup> Economic Survey of Latin America 1949, Economic Commission for Latin America, United Nations (E/CN.12/164/Rev.1).

Before considering these practical aims, it is necessary to analyze the nature of the phenomenon of disequilibrium, which must be sought in certain aspects of the technique of production that are of great importance to primary producing countries. In a broad sense, technical progress has been reducing the share which the value of primary products represents in the value of finished goods. In other words, the share of primary products in the real income of the population has been declining, especially in the great industrial centres. There are various reasons for this tendency, among which the following should be cited:

- a) Technical changes, by constantly creating new products, bring about a progressively more complex or refined elaboration of the raw materials required in the productive process, thus diminishing their contribution to the value of the finished article. In relation to the total value, the proportion of primary materials employed in the manufacture of an aeroplane is therefore lower than in a locomotive, which is again lower than in a horse-drawn vehicle;
- b) Technical progress facilitates a better utilization of raw materials, sub-products and by-products, so that the same amount of primary products is now equivalent to a proportionately greater value of finished goods than heretofore. Though there is no reason to assume that cotton piece goods contain a smaller quantity of cotton than one hundred years ago, generally speaking in our times the same amount of raw material provides industrial by-products or sub-products which make the total value of the finished products considerably greater than previously; and
- c) The materials made by synthetic processes, such as synthetic nitrates, artificial fibres and plastics, replace a number of natural products in spheres of industrial activity which are becoming increasingly important.<sup>1/</sup>

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<sup>1/</sup> After the completion of this Report, we learned of similar conclusions arrived at by Dr. H.W. Singer, and contained in lectures delivered in Brazil. See Revista Brasileira de Economia (September 1950) and Estudos Economicos (September-December 1950).

New forms of production and certain alterations which technical progress brings about in the structure of consumption, thus contribute to lowering the intensity of the utilization of primary products. Technical inventions are undoubtedly the dynamic factor which has brought about the greatest changes in demand. Moreover, the increment in productivity and per capita income which these inventions entail, has enabled demand to seek new forms of satisfying human needs. Thus it is a well-known fact a) that when the level of income rises, demand is diversified, and whilst there is only a relatively small increment of the demand for ordinary foodstuffs, the demand for various articles created by modern technical inventions rises sharply after a certain point. Furthermore, these inventions imply an increasing industrialization of foodstuffs, in order to obtain higher standards of hygiene, preservation or convenience, thus widening still more the gap between the rate of increase of the primary product and real income; and b) that within the tendency of total demand to diversify, the demand for personal services increases, therefore lowering the proportion of primary products in the supply of concerted demand of the population.

The combination of all these factors, arising from the evolution of the technique of production, has an effect of utmost importance to the periphery, since it causes imports of primary products in the industrial centres to expand at a lower rate than real income. Thus the income-inelasticity of primary imports in the centres tends to be lower than unity.

Other facts must also be mentioned which are partly the result of technical progress. In the industrial centres the increase of productivity may also be perceived in primary production, and it often enables them to compete satisfactorily with the periphery on foreign markets, despite the low salaries prevailing in the under-developed countries. In other cases, where this does not occur, the industrial centres resort to the application of customs tariffs in order to maintain or stimulate their primary production, thus protecting the domestic market against competition by the periphery. This is another of the consequences of the unequal distribution of the increase of /productivity in the

productivity in the various domestic activities and in the various countries, and it also springs from a low international mobility of labour, as was pointed out in last year's Survey.<sup>1/</sup>

As a result of the protection of primary production in the great industrial centres, the proportion of the population gainfully employed in these activities has not decreased to the extent it might otherwise have done, and consequently the increase of the population gainfully employed in industry, services and other activities has not been as great as it might otherwise have been. Likewise, in the periphery there would not be such a pressing need for labour to obtain employment in secondary and tertiary occupations when it is unavailable in primary activities. The protective tendencies of the industrial centres merely accentuate the compulsory migration of the peripheral population from primary into secondary production and services, since ultimately this displacement is occasioned by the extension of technical progress.

Imports of primary goods in the centres tend to increase proportionately less than real income. Hence, if the Latin American countries could only expand by means of primary exports, as was usual before the world economic crisis, their rate of economic development would be considerably lower than in the industrial centres.

However, these countries appear to expand at the same rate, if not more rapidly, than the centres, as a whole, owing to the stage of development which most of them have reached. The rate of growth of the population is much greater, and productivity, because it is relatively lower, has therefore a wider margin to rise.

A study of the twenty years preceding the world economic crisis shows unquestionably that the export activities of the Latin American countries, even allowing for their exceptional development in Venezuela, have been insufficient to offer full employment to the vegetative increment of the gainfully employed population and to the excess population created by the extension of technical progress in primary production.<sup>2/</sup>

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<sup>1/</sup> Op. cit. pages 84 ... 97

<sup>2/</sup> Op. cit. pages 15 to 45.

Hence the dynamic need for industrialization, in order that economic development may take place at a higher rate than the expansion of primary exports. Industrialization absorbs a part of the available population, enabling another part to be absorbed by associated activities such as transport and trade, which expand together with it. The increment of average productivity springing from the process of industrialization, together with the increase of productivity caused by technical improvements in primary production, raise per capita income and lead to a growing demand for services, thus creating new sources of employment. Industrialization is linked with various phenomena inherent in economic development, and if reference is only made to this aspect, it is for reasons of brevity and not because the importance of other phenomena has been overlooked.

#### Technical Progress in the Periphery and the Demand for Imports

2. During the course of development, when the new methods of production established in the more advanced countries were being progressively assimilated by the under-developed countries, similar changes took place in the structure of demand in both areas. As real per capita income surpasses certain minimum levels, the demand for industrial products tends to grow more than that for foodstuffs and other primary products. However, the position of the under-developed countries is very different from that of the more advanced countries, since the latter import primary products from the former, the income-elasticity of which is much lower than that of the industrial products which the periphery imports from the centres. In order to increase their real income, the peripheral countries must import capital goods, the demand for which increases at least as much as real income, whilst the raising of the standard of living is reflected in the intense demand for highly elastic imports, which tend to rise more than income.

The dynamic difference between demand in the centres and in the periphery is of such importance that it would be advisable to analyze it more carefully.

/It is well known



It is well known that industrialization causes the Latin American countries to develop at a much greater rate than their exports. Since the capacity to import depends fundamentally on such exports,<sup>1/</sup> it is evident that real income in these countries generally tends to rise at a greater rate than the capacity to import. The substantial volume of imports, which expands at the same or a higher rate than real income, could not be obtained if other imports were not limited, so as to prevent total imports from persistently exceeding the capacity to import, except when the gap can be covered by foreign investments.

Little foreign capital has been invested in Latin America since the world economic crisis. The Latin American countries have only been able to develop in a measure corresponding to the essential changes which have taken place in the structure of their imports.

When income rises more sharply than the capacity to import, the need to modify the composition of imports springs from three different causes which, in fact, are closely related to one another.

a) Let it be assumed that income increases in relation to the population, whilst the level of per capita income remains constant and no alteration occurs in the structure of demand.

Assuming an initial income of 100, of which 40 are applied to imports, and are compensated by an equivalent amount of exports, this initial income increases from 100 to 150, i.e. 50 per cent, whereas the capacity to import rises from 40 to 50, that is, only 25 per cent.

Even when the composition of demand has not altered with the increase of income, the structure of imports will have to be modified. In fact, when income has been increased to 150, 40 per cent of this, that is 60, will be spent on goods which were formerly imported. However, the capacity to import continues at 50, and therefore the difference of 10 must be produced by domestic industry. It is evident that if domestic production is not developed, income could not increase to this extent, since the corresponding increment of demand could not be supplied by imports, which would have permanently surpassed the capacity to import. Once monetary reserves had been exhausted, the situation would have become untenable.

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<sup>1/</sup> It would be redundant to review the problem of the terms of trade, which was dealt with at length in the Economic Survey for Latin America, 1949.

It is hardly likely that this increase of 10 in domestic production, with a view to replacing imports, will occur proportionately in all these goods. Generally, the goods which can be most easily produced, or the production of which can be most easily increased, will be selected. Thus imports of certain goods will be suspended or reduced and domestic production of these correspondingly developed, whereas imports of other articles will continue in a measure corresponding with the increment to demand, but there will be no expansion whatever of domestic production of such goods. An alteration in the structure of imports will thus have been effected. The distribution of the 50 now imported will differ from the 40 formerly imported.

b) Let it be assumed that per capita income increases and that at the same time the structure of demand is altered.

The foregoing example will be used, but instead of seeking to increase income in a measure with the growth of the population, it is increased as a result of a 50 per cent improvement in the level of productivity, and therefore in real per capita income.

In this case, the changes in the structure of demand, giving rise to a modification of the structure of imports, differ from those of the preceding example. These changes occur in a measure corresponding to the varying degrees of income-elasticity of demand for imported goods. Whereas in some cases there will be no increase, or only a very slight one, in others the increase of 50 per cent in income will cause a much greater increment of demand. To the extent that the increased demand will have to be satisfied with imports, it will be necessary to reduce or suspend other imports. Thus the new structure of imports and of domestic production will differ from the previous example.

c) Let it be assumed that total or per capita income does not increase but that the structure of demand is altered.

An income of 100 will again be assumed, of which 40 are used for imports as in the foregoing examples. The remaining 60 will be employed in acquiring domestic products. Income does not increase but the structure of demand is modified; demand for certain imported goods grows at the expense of domestic production. Imports increase,

/say to 45;

say to 45, whilst demand for domestic goods falls to 55. A double disequilibrium of the same magnitude thus occurs, of which one part is external, resulting from the excess of 5 in imports, and the other is domestic, and is caused by an equivalent deficiency of 5 in the demand for domestic products.

This position of disequilibrium cannot be maintained; income must either be reduced permanently, to a level where imports may be adjusted to the capacity to import, or the level of income is maintained by substituting imports with domestic products. It is necessary to reduce 5 from former imports and to replace them with domestic production, in order to allow for the new imports, as a result of the changes brought about in the structure of demand.

This may occur either because of a change in imports of consumer goods or because savings are increased, so that a greater volume of capital goods is imported. But it cannot take place without affecting the level of income, unless a change is made in the composition of imports.

As was pointed out, these three causes are closely bound to one another. The population grows, per capita income increases, and the structure of demand is altered not only because of these increases but also because of the persistent efforts of entrepreneurs, within a country and abroad, to modify the pattern of expenditure of the population in answer to continual innovations in productive technique.

The need to modify the structure of imports thus arises from essentially dynamic factors which are inherent to the process of development. Unless substitutions and changes take place, there can be no development.

### The Maximum Real Income, Exports and Industrialization

3. It will thus be seen that besides absorbing those sectors of the population which increase and migrate from other activities, industry also supplies a developing country with the manufactured articles that it cannot obtain abroad, owing to its limited capacity to import.

/The ultimate

The ultimate objective is the attainment of the maximum real income, that is, the goods and services which the population requires, according to its pattern of demand.

Two problems arise in the obtaining of this maximum. They both involve the best method of utilizing the productive factors. The first consists in determining to what extent the available factors in a growing economy should be employed in increasing exports, with a view to expanding imports, and to what extent agricultural and industrial production for the domestic market should be expanded. The second problem lies in ascertaining which goods can most advantageously be imported and which should be produced internally (given optimum quantities of imports and domestic production), in order to maximize real income.

The first problem will be examined in the light of total primary production in the Latin American countries.

The total volume of primary products depends mainly on the level of income in the industrial centres, on the state of productive technique, on the structure of demand, and on the degree of protection. Export prices in relation to those of manufactured goods generally appear to exercise only a secondary influence on the volume of exports;<sup>1/</sup> they seem to influence, though, the proportion of income which the industrial centres must allocate to the acquisition of primary products.

Thus the volume of exports is not determined arbitrarily. Because of its low price-elasticity, the concerted effort of the primary producing countries to increase the volume of exports substantially, without regard to the rise in income in the industrial centres, would be attended by so great a price decline that the value of exports would not increase and might even be lower than previously.

This would not prevent a relatively small and isolated primary producing country from increasing its exports to the detriment of other competing countries, by means of slight price sacrifices. It is

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<sup>1/</sup> Op. cit. pages 25 - 27

nevertheless evident that if one considers the extensive problem of peripheral development, this is no solution for the area as a whole.<sup>1/</sup>

Primary producing countries as a group are faced with the very limited option of either employing the increment of their productive factors in increasing exports so as to acquire supplementary imports, or alternatively, of increasing production for domestic consumption.

A brief explanation would help to elucidate the problem. Let it be assumed that countries producing a specific article obtain 100 dollars annually per worker employed in exportable production, and that they employ this amount to obtain an equivalent volume of imports. Another assumption is that one million workers are employed, in other words, that the value of total product is 100 million dollars, and that there are a further 100,000 workers and capital available, which can be employed either in increasing exports and obtaining additional imports, or in the production of these goods domestically.

Let it be further assumed that the productivity of these 100,000 labourers in domestic production is merely 70 dollars per capita,<sup>2/</sup> which is lower than the value accruing from export activities. It is evident that if exports could be increased 10 per cent by making use of these 100,000 workers, without allowing per capita yield to be lowered by the fall of prices, then it would be more profitable to employ the labour force in export activities rather than domestic production. On the whole, however, this is hardly likely to occur, if the increase of production exceeds the increment to consumption in the importer countries, in terms of the expansion of income and other factors, which determine the volume of demand. It would be sufficient for prices to fall 9.1 per cent, thus reducing the yield per man to 90.9 dollars, for the total value in dollars to be decreased to the 100 million prevailing earlier, despite the increase in the volume of goods.

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<sup>1/</sup> All generalizations of this nature should take into account certain individual cases. Given the stage of its technical utilization, there are many characteristic features of petroleum which place it in a very different position to any other primary products.

<sup>2/</sup> Computed according to the value of imports of identical goods of foreign origin.

It is evident that instead of increasing production for export it would be more convenient for primary producing countries to employ these 100,000 labourers in production for domestic consumption, despite the fact that the yield per worker (90.9 dollars in export activities) is greater than that accruing from domestic production (70 dollars).

This simple conclusion is of interest, since the current contradictory theory might be cited, namely, that the optimum solution lies in a distribution of productive effort whereby the marginal yield per worker in export activities is equal to the marginal yield per worker in activities supplying the domestic market, taking into account the differences in skill required by these activities.

If the industrial centres and the periphery are viewed as a whole, this latter theory would be correct since it would thus be possible to obtain the maximum volume of goods or of real income. However, because of the price-inelasticity of demand in the industrial centres, the latter would have been favoured in the distribution of these goods, to the detriment of primary producing countries.

Undoubtedly, in the case of absolute mobility of the factors of production, income or the remuneration of these factors would tend to be uniform in a given country and as between several countries. Thus, provided uniform skill throughout, the same wage level would obtain. Consequently, if in the foregoing example the yield of export activities declines, together with the wage level, there would be a displacement of the productive factors from these to other activities. Since these factors could not be employed in additional production for domestic consumption, where, because of the lower yield, wages would similarly be lower, excess labour would migrate to other countries, until wages were equalized.

It is therefore evident that an example such as the above could not occur, if the assumption of absolute mobility of the factors of production obtain. But it is unrealistic, whereas the example reflects conditions which are very similar to those found in a country in an active phase of development.

/Let us consider

Let us consider the example again for a moment. In order that the increment of exports should be advantageous to the periphery, export prices should not fall below a per capita yield of 97.3 dollars. Thus, the increment to the value of exports and, therefore, to additional imports, would amount to 7 million dollars, which is the same increase in value to be derived from production of these goods for domestic consumption. Beyond this neutral point, it would be advantageous to utilize the productive effort in domestic activities.

It should be noted, however, that the cost of production for domestic consumption would be considerably higher than that of the imported article. If at the neutral point a worker engaged in export activities could obtain 97.3 dollars worth of imported products through trade, in domestic activities he would obtain only 70 dollars worth of the same products, that is to say, the cost of the latter would be 28 per cent higher. Domestic production could not be fostered unless it were protected against foreign competition.<sup>1/</sup>

The Concept of the Economic Advantage of Industries where the Level of Productivity is Lower than in the Centres

4. It has been shown that in view of the factors which influence the demand for primary products in the industrial centres and the very small margin of international mobility of the factors of production, it might be expedient for a peripheral country to employ the increments of the labour force in domestic production, even when the cost of such production is higher than that of competitive imported articles.

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<sup>1/</sup> It is necessary to realize that the free interplay of economic forces might give rise to another solution which would render protection unnecessary. It would be sufficient for the excess population to exert pressure freely on the wage level, until it was lowered to such an extent that the cost of domestic production would equal that of foreign production. However, this would involve a serious deterioration of the terms of trade and it would be greatly detrimental to total production, further to involving other considerations which are alien to the main thesis of this work. There is considerable theoretical interest in this particular example of the free interplay of factors in the peripheral countries, associated with their low mobility as between these countries and the industrial centres.

If complete mobility existed, this proposition would be inadmissible. Given the tendency for wages to equalize, the economic impossibility of increasing exports beyond a certain limit would cause the gainfully employed population to seek higher incomes in other countries. It could therefore be shown that it logically follows that the total volume of production and of real income for the whole world would be an optimum if certain other conditions obtained which need not be mentioned here. However, actual conditions differ from this theoretical model, and they are influenced by other more important factors than the purely economic. The economic development of the periphery is therefore not compatible with this theory.

The costs in a great number of Latin American industries and in large sectors of agricultural production are, in fact, higher than those of imports. The prevailing low incomes cannot offset the relatively low productivity in these activities. This does not imply that such activities are necessarily uneconomic. It simply means that goods which cannot be imported because of the limited capacity to export and to import must be produced by domestic industry, at a higher cost than if exports could be easily increased in order to provide the means of obtaining the necessary imports.

The concept of economic advantage should be based on the total available supply of goods for the population. It has been shown that a greater volume of goods is obtained despite higher costs. But it is evident that this volume could be increased proportionately with the raising of Latin American productivity to a level approximate to that obtaining in the great industrial centres.

This general proposition is not incompatible with individual solutions. In a given country and in given circumstances, it might

/be possible



be possible to expand the exports constantly and markedly, out of proportion with the rate of increase of income in the industrial centres. The Mission sent under the auspices of the International Bank for Reconstruction and Development, to study problems of economic development in Colombia,<sup>1/</sup> investigated the advisability of increasing exports before undertaking an iron and steel industry, making use of the substantial mineral deposits in that country. The discussion of this concrete problem would be out of place here, but attention should be drawn to the fact that the reason given for considering it inadvisable to establish such an industry was that its cost of production would be greater than that of imported products, c.i.f. in Colombian ports. On this basis, it would be practically impossible for industrialization to develop in Latin America in its present stage of economic growth. Hence the evident necessity of drawing up a theory of development in order to establish clearly defined principles for practical action.

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<sup>1/</sup> Bases de un programa de fomento para Colombia (Basis of the Development Programme for Colombia), report of the Mission headed by Lauchlin Currie. It should be remembered that though the International Bank gave its support to the Lauchlin Currie Mission, it does not necessarily support the views expressed in the Report. The Bank has, in fact, also provided funds, with a view to substituting imports by domestic production, without strict regard for this concept of costs.

Optimum Distribution of the Factors in Different Sectors of Domestic Production

5. Attention should now be given to the second problem presented. In view of the optimum volume of imports on which a country may rely under given circumstances, and the increased capital it could muster, it is necessary to ascertain in what sectors of production investments should be made so as to maximize real income.

The principle of marginal productivity would appear to meet this requirement fully. The increment of capital should be utilized so as to maximize production, which is only possible when the marginal productivity of the different investments is equalized, production being calculated at import prices, in order to avoid the illusion created by customs tariffs, exchange controls, or producer combines in regard to such estimates.

This criterion offers a basis on which to determine the best means of utilizing the limited capacity to import, that is, which products that were formerly imported should be replaced by domestic production, and which it is more advisable to continue importing. The advantage of developing an iron and steel industry instead of a heavy chemical industry, or of developing domestic production of all the footwear required by the population, or of the cultivation of all the wheat at present imported will depend on the comparative increases of production which can be obtained in the different activities, according to the diverse alternatives open to the investment of the available capital besides other conditions influencing productive efficiency. If the same amount of capital as is required by an iron and steel industry gives rise to higher productivity in that industry than that in other activities replacing imports, its development will be economic, despite the fact that its cost may be higher than that of the imported product. It may be higher, but not so high as in other cases, given the average level of productivity in the country.

These considerations are also applicable to agricultural production, which, in some Latin American countries, may be relatively easy to increase. In other countries, however, the increase in agricultural

/output

output involves extensive irrigation works or other improvements. If it is expedient to replace certain imports by agricultural production, or by the development of industrial production, how the two may best be combined, can only be determined by comparing the levels of productivity.

However, the maximization of productivity in the form described previously does not always imply that a satisfactory means of maximizing income has been found. Certain productive activities, in which the level of productivity is lower than in others, may nevertheless be eminently advantageous, owing to the fact that they diminish a country's vulnerability to foreign fluctuations and contingencies. The experience of the Latin American countries is very instructive at this point, and it is easily understandable that this type of considerations may prevail in certain concrete examples. More will be said later in this connexion.

The fact that the theory of marginal productivity may assist in solving the practical problem set forth above leads one to enquire whether, in view of the possibility of obtaining the optimum level of production by means of free competition, it would not be better to permit the uncontrolled play of economic forces, in order to obtain the best solution. This might be the case, were it not necessary to raise protective barriers in order to substitute domestic production for imports, and if, in certain cases where future demand must be estimated long before-hand and large investments made, private enterprise alone were not incapable of solving certain vital problems of economic growth. This being so, it is necessary to adopt certain principles, on the basis of which the selection of the various forms of investment can be made.

#### Growth, Disequilibrium and Inflation

6. In its bare outline the thesis of economic development set forth herein is the following: export activities in the Latin American countries are incapable of absorbing the additions of the labour force arising from technical progress in primary activities and the vegetative growth of the population. Industrialization plays essentially the dynamic role of absorbing directly the redundant labour force and of stimulating other /activities

activities including agricultural production for domestic consumption, which contribute to the process of absorption. Thus, total income increases, and per capita income improves, as a result of technical progress and industrialization. As income rises and the structure of demand changes it becomes essential to modify the composition of imports and develop domestic production of substitute goods, so as to enable other imports to expand intensively.

If imports are not adequately readjusted, the expansion of income gives rise to external disequilibrium: imports rise faster than the capacity to import.

No instrument exists in the economic system of the periphery which might provoke the spontaneous readjustment of imports, in order to prevent such disequilibria. Hence, as income increases more rapidly than exports and than the capacity to import, a persistent tendency to external disequilibrium develops, as was pointed out above.

Inflation likewise causes external disequilibria. Since, in the Latin American countries, the process of growth is usually linked closely to phenomena of an inflationary nature, it may be assumed that this persistent tendency to disequilibrium in the process of development is merely the result of inflation.

Disequilibrium may nevertheless arise in the absence of inflation. The lack of this spontaneous instrument of readjustment in imports is sufficient for an excess of imports to occur at a given moment, due to deficient development in the production of substitute articles. It should be remembered that if the structure of income expenditure is modified and a larger proportion thereof is applied to imports, disequilibrium must inevitably follow, as was shown above.

The characteristic form of generating disequilibrium in the case of non-inflationary development has been encountered in the cyclical upswing of some of the Latin American countries. Real income increases, industry and other domestic activities expand and no obstacles are

/placed in the

placed in the way of expansion of imports, because of the cyclical expansion of exports. However, when exports and income diminish, it is found that the pattern of income expenditure is not compatible with the structure of imports, especially when an attempt is made to maintain the earlier level of income by resorting to credit expansion.

Development cannot continue for long under a non-inflationary situation if disequilibrium prevails, since it would drain monetary reserves and, at the same time, there would be no stimulus to continue growth, because external disequilibrium is attended by an insufficiency of domestic demand, as will be shown in the following chapter.

The difference between this type of limited development and that of an inflationary order does not exactly lie in the fact that inflation enables the process of development to continue, despite the prevalence of disequilibrium, but in that it corrects the insufficiency of domestic demand and gives rise to certain reactions which modify the composition of imports, enabling their continued growth, provided other conditions (which will be discussed later) prevail. These then are the results of monetary depreciation or direct import restriction to which inflation gives rise.

Inflation thus plays a dynamic role in the Latin American countries. If, on the one hand, it emphasizes the disequilibrium inherent in the process of development, it also tends to correct it, but at a substantial social cost. In certain cases, this cost is disproportionate to the limited dynamic effects of inflationary measures. One of the fundamental problems of economic development in these countries is the stimulating of expansion without provoking inflation, and the preventing of disequilibrium by changing the composition of imports.

### CHAPTER III. THE PROBLEM OF PRODUCTIVITY AND THE RELATIVE SHORTAGE OF FACTORS OF PRODUCTION

#### The Two Aims of Technical Progress and the Density of Capital

1. In the preceding chapter, the validity of the principle of the yield or marginal productivity of capital was acknowledged in connexion with the planning of an investment policy for the Latin American countries. Accordingly, if the distribution of savings is carried out so that the productivity of the marginal increment of capital per gainfully employed person is the same in all branches of economic activity, production will be maximized. The optimum degree of capital density per gainfully employed person in each branch will thus have been attained, that is, the exact amount required in order that total economic activity shall yield the maximum production possible.

The mere statement of this principle does not suffice for the analysis of the concrete problems of investment encountered in the economic development of the Latin American countries. Outstanding amongst such problems is the determination of the most suitable density of capital per gainfully employed person, in relation to the amount of capital available.

As a result of technical progress, the optimum density of capital per gainfully employed person has tended to rise continuously in the great industrial centres. Thus, a constant increase in productivity has been achieved which, by raising per capita income and expanding the margin of savings, has facilitated the introduction of new technical methods, thus increasing further the density of capital, the process being repeated successively.

This process has different aspects in the under-developed countries. Technical improvements do not appear gradually, as

/they did

they did throughout the course of development of the great centres, nor do they evolve through the successive stages of evolution as did their capital goods. In carrying out their investment programmes, these countries find that they must import the same equipment as is used in countries which have developed over a long period. Thus, equipment which represents a high density of capital per gainfully employed person and which is compatible with the high level of per capita income in the industrial centres, is equally available to the under-developed countries, in which per capita income, and therefore the capacity to save, are evidently lower.

In other words it is theoretically possible for the Latin American countries, considering their relative scarcity of capital and abundance of human labour to have a density of capital lower than that of the more advanced countries, but in view of the nature of the technical process, and its irreversible character, the under-developed countries have a very limited possibility of attaining in fact their optimum density of capital. It is a fact that in some cases they are in a position to use less complex equipment, whereas in others they may adopt backward methods which involve low capital investments. However, if they seek to modernize the equipment, due to the very low productive efficiency of the methods in use, they are often faced with the necessity of acquiring machinery with a high capital density, since given the nature of the productive technique utilized, each unit of equipment is generally indivisible, and therefore its density cannot be reduced, to bring it in line with the density which is compatible with a relatively small volume of available capital.

Were sufficient capital available for investment in all the branches of economy, no such problem would arise. It would only be necessary to assimilate the technical methods of the more advanced countries in order to obtain approximate, if not equivalent, levels of productivity. This, however, is not the case. The problem of capital density arises precisely because there is a shortage of capital, though its terms vary considerably from one Latin American

/country to

country to another. In some of these countries, 60 per cent of the gainfully employed population is working under conditions of very low productivity and meager capital, whereas in others, capital availabilities and productivity resemble those of the more advanced countries. Hence it becomes necessary to qualify the following generalizations, in observing the varied range of concrete facts.<sup>1/</sup>

2. The diffusion of modern productive technique thus gives rise to a paradox. Countries having an abundant labour force and a scarcity of capital, are faced with a form of productive technique of which one of its predominant traits, especially in the United States, is the savings of as much labour as possible, by means of increasing the capital outlay per worker. Undoubtedly technical progress also seeks to increase the volume of production per unit of capital, whilst reducing the amount of labour required. However, though these two aims call for increasing capital investments per gainfully employed person, and though in the abstract they may be considered separately, technical development has linked them in such a way that, as a rule, it would be impossible to break down investments into the part which is aimed at increasing production per unit of capital and that which is directed toward saving labour. Undoubtedly sufficient capital has been available in the great industrial centres to realize both of these aims progressively. In other words, these objectives have been combined in a manner and measure compatible with the accumulation of capital. Thus, with the exception of brief intervals, investments to reduce labour consumption have tended to be made in accordance with the availability of the capital necessary for this purpose and, at the same time, for the absorption of the labour thus displaced.

In view of the fact that these aims have been achieved simultaneously and considering the indivisibility of equipment, in

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<sup>1/</sup> Another aspect of this problem lies in the possibility of intensive utilization of the equipment available, assigning two or even three shifts to its operation. The average capital investment per gainfully employed person would then be reduced, and capital requirements thus lessened. However, a study of this aspect in the course of this brief analysis would cause us to deviate considerably from the purpose of this report.



which technical progress is embodied, the combinations adopted in the economy of a highly industrialized country, with a high per capita capital density, cannot be undone arbitrarily and transformed into other combinations which conform more closely to prevailing conditions in a less developed country, where per capita capital density is much lower. It is logical that if the combinations prevalent in the former were to be transplanted to the latter, there would not be sufficient capital to absorb the amount of labour saved. In order to avoid this self-defeating consequence, it would be necessary to obtain a type of equipment in which investment is made with a view to increasing production rather than to reducing labour consumption per unit of capital.

This, then, is the problem which faces countries in which there is a relative scarcity of capital since, as a rule, the characteristic indivisibility of equipment prevents the adoption of any combinations other than those resulting from the evolution of the great industrial centres. Despite this, let it be assumed for the moment that each of these aims could be achieved independently, with two different types of equipment and by means of separate investments.

In order to clarify this idea, it will be assumed, in the example contained on the attached table, that there are two types of equipment, namely, A and B, which are being improved by successive capital investments so that an amount of 4,000 has been invested by the fourth stage in the evolution of each type of equipment. However, whereas in equipment A the increase of capital only expands production, without reducing the number of 100 workers engaged since the first stage, in equipment B production remains constant whilst the amount of labour, namely, 100 workers, in the first stage, is reduced to 4 by the fourth stage. In order to approximate reality, let it also be assumed that both types of equipments can be pooled in a third type C, in which both objectives are attained simultaneously. Lastly, let it be assumed that there are only 8,000 units of capital available. The problem consists in determining the plan of investment whereby production can be maximized. From the figures in the example, it will be clearly seen that an investment

Successive Investment in the Development of Equipment

<u>Stages of develop- ment</u>	<u>Number of workers</u>	<u>Increment to invest- ment</u>	<u>Total invest- ment</u>	<u>Increment of produc- tion</u>	<u>Total produc- tion</u>	<u>Production per worker</u>	<u>Production per unit of capital</u>	<u>Capital per worker</u>
<u>"A" Production Increasing Investment</u>								
1	100		1000		500	5.0	0.50	10.0
		1000		1000				
2	100		2000		1500	15.0	0.75	20.0
		1000		1500				
3	100		3000		3000	30.0	1.00	30.0
		1000		2000				
4	100		4000		5000	50.0	1.25	40.0
<u>"B" Labour Saving Investment</u>								
1	100		1000		5500	5.0	0.50	10.0
		1000		-				
2	80		2000		500	6.2	0.25	25.0
		1000		-				
3	50		3000		500	10.0	0.17	50.0
		1000		-				
4	6		4000		500	83.4	0.12	666.7
<u>"C" Total Investments</u>								
1	200		2000		1000	5.0	0.50	10.0
		2000		1000				
2	180		4000		2000	11.1	0.50	22.2
		2000		1500				
3	150		6000		3500	23.3	0.58	40.0
		2000		2000				
4	106		8000		5500	51.9	0.69	75.0

in combination C yields the maximum production per worker, but, on the other hand, only 106 workers will be employed and total production would be lower than if all the capital available were concentrated in equipment A. In the latter, the 8,000 units of capital enable 200 workers to be employed, yielding a higher volume of production, despite a lower productivity per worker.

If the availability of capital were sufficient to enable equipment C to be furnished to 200 workers, a much higher volume of production than before would obviously be obtained. But in this instance, 14,800 units of capital would be required.

Between these two positions, there would be a wide range of intermediary alternatives, varying in relation to capital availabilities, and provided that investments in equipment A could be combined with those in B, in such a manner that all the labour displaced would be entirely absorbed. In other words, there would be a series of combinations of A and B in equipment C, in accordance with the greater or lesser amount of capital, between the minimum of 8,000 and the maximum of 14,800 mentioned above. Undoubtedly, if the capital available were not limited to this latter amount, but continued to increase, it would be necessary to find new combinations with a relatively larger amount invested in equipment B.

In practice, however, it is not possible to apply these different combinations according to the degree of scarcity or relative abundance of capital in relation to the labour force available. Most of the equipment is manufactured in countries where the per capita capital density is high and as a rule the less developed countries have no alternative other than to adopt the combinations of the former, except insofar as they can be modified. Since in these combinations a large proportion of the investment is designed to save labour, the paradoxical situation referred to above rises. Thus the under-developed countries are compelled to use an excessive amount of their savings in displacing labour which is thus added to the existing reserves that cannot be absorbed with a satisfactory level of productivity, due to the shortage of savings.

3. Let us now examine this problem from another standpoint.

Combinations C has been considered in the fourth stage of evolution

/of the equipment

of the equipment, and in the hypothesis that there is not sufficient capital to absorb displaced labour, as has just been pointed out. However, it might be decided not to enter upon the fourth stage but to remain, let us say, at the third, in order to apply half the capital per gainfully employed person, thus employing twice as much labour. However, this solution would not be advantageous in the aforesaid example since the marginal return in the third and fourth stages is greater than the the marginal return of respective increment to capital in the first and second stages, owing to the form in which production increases as the equipment improves. In other words, when the marginal return of capital increases, it is advisable to continue increasing the per capita density of capital, instead of lowering it, and to employ more labour. On the other hand, if the marginal return decreases, it would be better to stop at a lower density of capital, thus obtaining the maximum return per unit of capital and consequently the maximum increment of production. However, the opposite might occur and it might be advisable to remain at the preceding stage, in view of the decreasing marginal yield obtained subsequently. In this case it is conceivable that combination C is the optimum. It is quite possible that, in certain cases, equipment with a lower density of capital might be more advantageous, whereas in other cases, the utilization of such equipment involves a definite technical regression. Very little information is available in this connexion in the Latin American countries and we are therefore confronted with one of the most promising fields of investigation, both from the theoretical point of view and that of practical results.

4. In order not to render the example used too complex to illustrate in its bare outlines a problem of such vital interest, it has been decided to limit the amount of available labour, the employment of which calls for new capital investments. These workers may constitute a real or virtual surplus of the gainfully employed population, as was pointed out in the Economic Survey for last year.<sup>1/</sup>

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<sup>1/</sup> Op. Cit., page 48.

The excess is real in that it is not unusual in these countries to find workers who, though not unemployed, work intermittently or, alternatively, in occupations with a very low remuneration, a fact which can only be explained by the relative abundance of labour. No additional capital investments are required in such circumstances to free this labour from their present occupations. The only investments required are those which will absorb these workers into industry and other occupations with a higher productivity. On the other hand, when a virtual surplus of labour exists, it is essential that the investments free labour from occupations in which the technique is primitive and productivity low, transferring the workers to other activities with a higher level of technique and greater productivity. This gives rise to the surplus which can only be employed by the making of additional investments.

In the latter example, which is typical of primary production, it is essential to combine the investments directed to save labour with those aimed at increasing production per unit of capital.

Viewing the problem from the standpoint of the total economy of an under-developed country, the following considerations arise. How best can the scarce capital available be distributed in order to (a) absorb, in the first place, the real surplus of the gainfully employed population, for the releasing of which no investment is required, and (b) to reduce labour consumption or free workers gainfully employed in primary production, so that they may be fully absorbed by industry and other activities, in such a way that maximum production be attained, with the optimum investment of the available capital.

It is evident that if there is a real surplus of population with great mobility, it will not be convenient to invest capital to increase further the surplus in primary production, but instead the original surplus should be absorbed. Once this process has been completed, it would be equally inadvisable to create a larger surplus in primary production, or even in industry, than could be absorbed with the available capital. This would be better invested in employing labour rather than in freeing it.

Technical Unemployment and the Role of Capital Industry

5. Turning again to the saving of labour, which is generally entailed by equipment of high capital density, it should be noted that this problem is typical of the under-developed countries. This does not imply that, in the large centres, the introduction of such equipment has not occasionally given rise to a surplus of labour. However, the problem is not the same. The form of technical unemployment which generally occurs in these centres, especially during the cyclical downswing, is not super-imposed on a structural problem of large labour force, with little capital and a low productivity, as occurs in the under-developed countries. It is a transient phenomenon, which will occur as long as new investments do not reabsorb the unemployed. If this process of absorption does not take place rapidly, it is not due to a deficient capacity to save, but to flaws in the operating of the system. On the other hand, in the under-developed countries where capital is inadequate for the intensive absorption of low productivity labour, the excessive reduction of labour, by means of new capital investments or the replacement of equipment, intensifies the structural problem.

In the growth of the industrial centres, equipment of high capital density had been incorporated into productive activity because savings were sufficient to introduce it to all branches of the economy in which the entrepreneurs found it advantageous. The equipment, therefore, corresponds to a high income and a high capacity to save. On the other hand, in the under-developed countries, these equipments are out of line with the relatively low income and low capacity to save which characterize them. The fact that certain entrepreneurs may be in a position to acquire such equipments does not by any means imply that there is sufficient capital available to generalize their use. It is necessary to distinguish between the interest of the entrepreneur and the general interest of the economy. The entrepreneur is only concerned with the minimization of his costs of production and the increase of his profits. As a rule, the manner of combining the increase of production and the reduction of labour consumption per unit of

/capital in order

capital in order to achieve his objective is merely a secondary and at times unimportant consideration for the entrepreneur. If his action causes technological unemployment and the unemployed cannot be absorbed because of the scarcity of capital, the entrepreneur will nevertheless have increased his profits even when the capital invested in saving labour instead of increasing production involves a misuse of capital from the standpoint of the country's economy, apart from the social repercussions of the phenomenon.

This phenomenon is not so evident when the reduction of labour consumption entailed by the introduction of this equipment, instead of causing technological unemployment, prevents the absorption of labour displaced from occupations with a lower productivity. This absorption might have taken place if the part of the capital required to save labour had been utilized in increasing production.

However, in the cases in which there are no better alternatives from an economic viewpoint in the under-developed countries, the latter, as was pointed out, are compelled to employ this equipment or they have to fall back on technical methods which imply a misuse of capital by reason of their very low yield. In other words, even though equipment with high capital density does not offer the best solution to the problems of development, in countries where there is surplus labour, they may constitute the least harmful amongst all practical means of increasing productivity within the reach of entrepreneurs.

6. There are still other differences between the under-developed and the more advanced countries. In the latter, technological unemployment tends to disappear as a result of new investments. The development of capital goods industries must have provided the strongest element of absorption, since employment in these industries has expanded more intensely than in consumer goods industries. Moreover, the increased profits accruing to entrepreneurs as a result of the reduction in costs, which stem from the introduction of these technical innovations, are to a large extent used for new investments thus stimulating demand for capital goods. It was pointed out in the last Economic Survey that the under-developed countries, lacking

/capital goods

capital goods industries, except in their initial stages, find themselves in a very unfavourable position from the point of view of their internal development, because the profits accruing from the cost reductions mentioned above, when employed in acquiring capital equipment, are transferred to the great industrial centres producing the equipment, thus stimulating employment there and not at home. Consequently, in countries where no capital industries exist, the investment of profits does not tend to re-absorb unemployment as in the great centres, but only in a measure in which it is invested in building, and in the small amount of equipment manufactured in these countries.

It might be argued that these countries have vast possibilities for absorbing technological unemployment in existing consumer goods industries or in those which might be established with a view to substituting imports. That is a fact. This, however, brings us back to the initial point of capital scarcity. If the investment of profits in capital equipment purchased abroad offered a means of absorbing all the surplus labour technologically unemployed from which these profits arise, the problem would be relatively simple. But this is not the case. There is a considerable difference between the profits accruing from the displacement of a single worker and the capital required in order to re-employ that worker. Profits accumulated during the course of several years would be required for his reabsorption. In this as in other aspects of economics, the influence of the time factor is of the greatest importance. Substantial capital investments are necessary if time is not to be wasted. Undoubtedly the existence of profits with which to amortize investments over a period is a favourable factor in stimulating the latter. However, in order to absorb unemployed workers, an immediate increment of capital, several times greater than the wages saved, would be necessary.

The foregoing considerations show that the problem of investment in the present stage of Latin American development has several distinctive features which make it impossible to generalize the conclusions drawn from the experience of the great industrial centres.

/We do not



We do not propose to examine these characteristics individually, but merely to draw attention to the more important of them, the first of which is the density of capital analyzed above, and its obsolescence, which will now be considered.

#### Obsolete Equipment and the Shortage of Capital

7. The persistent utilization of certain forms of obsolete equipment in combination with other highly efficient materials, is often encountered in Latin America. This is generally accounted for by the habits of the entrepreneurs, and in many cases this explanation might be acceptable, if it had not been frequently observed that the same entrepreneur uses concurrently and at the same factory obsolete and modern equipment, or that he seeks, which is even more significant, new investments in other fields of productive activity and acquires the most advanced equipment obtainable instead of investing his profits in dismantling his old machinery. There is undoubtedly an explanation for each concrete example. At the root of the whole problem, however, the common denominator was found to be the shortage of capital; not that any individual entrepreneur lacked capital, but a general shortage in the country in which he pursues his activities.

From the economic standpoint of an under-developed country, if despite its obsolescence, capital equipment is in a sufficiently good condition to continue operating, the solution of the problem lies in an analysis of the alternatives. Evidently, the introduction of modern equipment to replace obsolete forms will cause an appreciable increment to total production, disregarding momentarily its labour saving effects. However, it could well be the case that the same amount of capital invested in other sectors of economic activity in which capital resources are limited and productivity is low, would lead to an even greater rise in production. It is ultimately a question of ascertaining in what manner a greater increment to total production in the economy as a whole may be procured by the investment of a

/given amount

given amount of available capital; whether this may be achieved by replacing equipment which, though old, is still productive, or whether this capital should be invested in order to absorb the real virtual surplus of the gainfully occupied population. In many cases, it would possibly be preferable to retain the antiquated equipment in production, since its elimination would involve the destruction of existing capital, when capital for new investments is scarce. This possibility is nevertheless limited, since the productivity of obsolete equipment might be reduced to such an extent, in the course of time, that by substituting new equipment for it the net increment in total production would be greater, in which case this increase would exceed that which might be obtained in other branches of the economy.

In other words, in countries where the scarcity of capital gives rise to the employment in primary position of a sizable part of the labour force with little capital and low productivity, as well as to concealed unemployment in other occupations, there is no reason to destroy existing capital, if despite its obsolescence, it is more productive there than in other activities, and if the increase of productivity which new investments would bring about in the latter activities is greater than that which might result from the replacement of obsolete equipments. If, in addition to the increase of production, the labour saving effect is also taken into account, the problem becomes more complex. Even though there may be more suitable fields for investment from the general economic standpoint, the entrepreneur may find it advantageous to discard the obsolete equipment, replacing it by modern equipment simply because he will thus be able to obtain a substantial saving in labour costs.

Problems of this nature will continue to arise in the

/under-developed countries,

under-developed countries, whilst there are still substantial internal differences in the density of capital and in the productivity of different sectors of the economy. Therefore, a policy of investment should make a clear distinction between the interests of the entrepreneur and the general economic interest.

In the more advanced countries, where technology and productivity have developed gradually and have been extended to all branches of economic activity, the problem does not arise in the same way. There are no vast sectors in which the scarcity of capital offers a wide field for investments, the rate of growth of the population is lower than in the under-developed countries and the high level of income determines an appreciable margin for savings. Consequently, there is sufficient capital to replace equipment normally; secondly to shorten its normal span of usefulness in order to introduce technical innovations that increase productivity and thirdly to absorb at the same time the labour thus saved. This does not imply that this phenomenon never occurs in the more advanced countries since, in the great centres, there are familiar cases in which obsolete equipment has been retained in certain sectors which, for specific reasons, such as the recession of exports, have not progressed commensurately with technical improvements.

/The special case

### The Special Case of Export Activities

8. Since it is not our purpose to make a complete analysis of the problem of productivity and the consequence of a shortage of capital, but rather to stimulate discussion of these topics, there are important aspects and specific situations which cannot be included in this brief outline. However, the question of export activities must be considered separately. The introduction of labour saving equipment in these activities may be essential in order to enable them to compete favourably on the international market and in order to expand exports themselves. There is, of course, no need to stress the fundamental importance of exports in economic development. The reduction of labour consumption in primary export activities most certainly intensifies the problem of the real or virtual surplus of the labour force which should be absorbed by industry and other activities, therefore increasing the amount of capital required for economic development. On the other hand, exports may procure a wider margin of savings and better means of transferring such savings in order to facilitate imports of capital goods. The measure in which this may be done depends on the extent to which both the effects of a reduction in labour consumption and of the increase in production per unit of capital can be retained within the country, in the form of increased income, rather than be transferred abroad, to the detriment of the terms of trade.

### The Problem of Investment in Agriculture.

9. The duality of the aims of technical progress, mentioned earlier in this chapter, is clearly perceptible in the case of agricultural investments, but, in practice, it is simple to distinguish the purpose for which investments in agriculture are made. Some investments are designed to increase the volume of production per unit of land, whilst others are aimed at reducing labour consumption per unit of land and per unit of production, by introducing technical methods in the different stages of the work, ranging from the utilization of the best implements to that of the most advanced mechanical equipment. Despite this division, there are certain relationships between both objectives which, for reasons of brevity, will not be taken into account in the following general observations.

/The increase

The increase in the yield of land is a general necessity in the Latin American countries in which, with a few notable exceptions, foodstuffs production is relatively low. There is also a general need for mechanization, since, in the course of economic development, it offers a means of obtaining a labour surplus which must be productively absorbed by industry and other activities.

From the general economic standpoint, both aims have a very different significance though for the agricultural entrepreneur, both the reduction of labour consumption and increased yield per hectare achieve the same results, namely, the reduction of costs and the increase of the profits accruing to him.

From the same standpoint, and independently of the individual advantage of the entrepreneur, the degree of agricultural mechanization which it is desirable to attain depends as it was stated before not only on the capital available to purchase equipment and thus to free labour, but also on the capital available to absorb the surplus labour in industry and other activities. If mechanization is extended beyond the capacity to absorb this surplus labour, a problem of technological unemployment is created similar to that set forth in the section dealing with the example about equipment. Moreover, in agriculture it is easier to avoid this problem, since the investments are divisible and in order to increase production the self-defeating reductions in labour consumption need not be made.

This is a very important aspect of the extension of technical progress in Latin America and one which has not yet been given due consideration. It is likely that, in view of the scarcity of capital with which to absorb the labour freed by the mechanization of agriculture, the reduction of labour consumption in some cases may have given rise to concealed agricultural unemployment or in the dense concentrations of population in the urban area.

There are nevertheless examples in which the absorption of surplus labour by industry has been very intense whilst mechanization has lagged behind. In other cases, the opening up of new cultivated areas in scarcely populated regions has led to intensive mechanization, since the /latter has

latter has proved to be more economic than the transfer and settling of large groups of the population which would otherwise have been required. There are also cases in which mechanization has become necessary in order to cultivate foodstuffs on what was formerly pasture land, rather than with a view to eliminating human labour, or to shorten the period of cultivation and thus reduce meteorological risks.

However, given the abundance of human labour on the land and the scarcity of capital, mechanization should be very carefully studied in programmes of economic development, especially because the scanty capital available might perhaps be far more advantageously employed in increasing production, particularly when a limit is reached beyond which surplus labour might not be absorbed.

10. Investments to increase production must also be considered from the general economic viewpoint. The land which can be utilized at once to expand the volume of production is likewise scarce throughout most of Latin America, with several notable exceptions; this factor, together with the scarcity of capital, constitutes one of the most serious drawbacks to economic development.

It is therefore necessary to use the scarce capital available so as to obtain the maximum increase of production from the land. Investments for this purpose may be divided into two main groups: those which tend to increase the yield per hectare, by technical improvement of the methods of cultivation, including seed selection and the utilization of pesticides, and other investments, designed to increase the arable area by irrigation, drainage, deforestation and recovery of areas wasted by erosion, or which provide the means of preventing erosion from reducing the arable area and from diminishing the actual volume of production.

The relatively slow growth of agricultural production in these countries, together with the general low levels of nutrition, emphasize the need to stimulate the former type of investment, especially in cases where this represents the more economic of the two methods, given immediate possibilities of increasing the yield. In all cases where a persistent effort had been made, substantial results have been obtained, compared with the relatively small amount of capital per hectare needed

by such investments. Undoubtedly little has been done in comparison with the magnitude of the task which the experts maintain must be carried out, as may be seen from the small amounts spent by most of the Latin American countries on agricultural research and experiments and on agricultural extension, in relation to their total public expenditures.

Nevertheless, the improvement of the methods of cultivation may also involve the opening up of new land, in order to achieve satisfactory results. In many countries, land with sparse rainfall and which has been exhausted by secular methods of cultivation, or impoverished by the type of culture, or by erosion prevails. However, where it is possible, large amounts of capital are required, not only to open up new land but also in order to introduce mechanization there, for the above-mentioned reasons.

It will be seen that here, as elsewhere, generalizations must be prudently made. Each country, and even the different regions within a country, have individual problems which must be considered separately in order to understand the concrete problems of economic development.

Not infrequently, there are cases in which the increase of agricultural production depends largely on improved utilization of existing available resources rather than on new capital investments. There are regions where the land is used uneconomically, not in relation to the improved methods of cultivation which might be adopted, but to the prevailing technique in that region or country. Thus, among others, there are cases in which, before undertaking costly programmes of irrigation, which might be justified at a later date, it is necessary to make better use of the water in lands which are inadequately irrigated; in other instances, land is wasted in areas of abundant rainfall, and in still other cases, natural pasture is used in land appropriate for artificial pasture of higher yield.

11. Thus, increased investment is not a panacea; the rational utilization of actual resources must also be considered. The solution encounters in many Latin American countries a serious obstacle in the system of land tenure. In some parts, there are vast stretches of well-cultivated land, whereas in others a poor or average utilization of a fraction of his land allows the large landowner to derive a substantial income from it. This

/problem is

problem is too familiar to require further consideration. There would be no reason for the industrial entrepreneur to allow a part of his capital to remain unproductive, except in periods of reduced demand. But, as a rule, the productive value of land does not deteriorate if it is not worked; in some cases, on the contrary, it may even improve, and its value is enhanced, in the course of time, commensurately with that of cultivated land, especially when inflation helps accelerate the normal process of increase of the income derived therefrom. In many Latin American countries, this feature, together with other social factors, causes a considerable portion of arable land to remain in the hands of a relatively small number of persons. This system of land tenure and the high value of the land, in relation to its present return (because of the advanced capitalization of future increments of its value), makes land almost inaccessible to the landless farmer. He is thus compelled to invest his limited resources in excessively small plots of land, in order to attain a higher standard of living than the very low which the agricultural workers have in most of these countries. Hence the unusual phenomenon of the minute subdivision of the land into numerous small uneconomic holdings that constitute a small part of the total area, whilst an insignificant number of landowners holds the greater part of available land.

There is little doubt that this problem may be solved as industrial development continues to absorb agricultural labour, but the process is slow and can only be speeded up by a sharp acceleration in the rate of the development of industry and other activities. Ultimately, it is a problem of investment, aside from other considerations, to be mentioned shortly. Substantial investments which will increase the demand for labour in activities of considerably higher productivity will compel the large landholders to mechanize and to increase the yield of the land and it will lead the small holder to abandon his parcel in order to obtain a higher return for his efforts.

It will readily be seen that the solution to the problem of land tenure is only a part of the general problem of economic development, if the considerable proportion of persons gainfully employed in Latin American agriculture is taken into account. Whatever the solution, little  
/progress can be



progress can be made in raising the standard of living of the agricultural population, especially in areas where the soil is poor and where secular methods of agriculture prevail, unless the surplus population can be displaced by technical progress, and unless that portion not required for work in the new areas opened up to cultivation can be reabsorbed into activities where productivity is high.

This does not imply that the problem of land tenure in the Latin American countries can be postponed. On the contrary, it should form an integral part of programmes of economic development, once an objective and impartial consideration of the different aspects of the vital problem of increasing agricultural production has been carried out. In regions where the land tenure system itself is not at fault in retarding progress, but rather the lack of investments and of technical action on the part of the Government, a different solution will be required from that applicable where the land tenure system constitutes the major obstacle. It is surprising that so little investigation in these concrete terms has been undertaken in this field, in contrast with all that has been written and planned with regard to the problem of land tenure. In other words, when there is a possibility of assimilating modern productive technique, extensive holdings may offer the most economical means of raising the level of productivity. Attention should be drawn to the recommendation of the Currie Mission <sup>1/</sup> as regards the better utilization of land in Colombia. It was proposed that land should be taxed in proportion to its productive capacity, so that landowners using their property uneconomically should not be in so favourable a position as those who cultivate their land economically. Evidently such a system would entail an adequate classification of the soil, which is not a simple task. This suggestion is of interest in that it indicates possible measures which, in addition to dividing up large tracts of land or preventing their subdivision into minute holdings, especially when the form of land tenure is an obstacle to the improvement of productivity, should be seriously considered in a programme of economic development.

1/ Op. cit., Part II, page 46

Immigration and the Surplus of Human Labour

12. In this brief outline of some of the aspects of the problem of productivity in Latin America, reference has been made to the real or virtual abundance of human labour, in relation to the shortage of capital and of arable land. It would now be of interest to ascertain if, in these circumstances, there is any point in discussing the possibilities of immigration, especially in countries where the disequilibrium of these factors is greatest. It is evident that if the productive capacity of these immigrants were comparable to that of the population which economic progress tends to displace from primary to secondary production within the country, then there would be no call for such immigration, since it would affect the process of migration within the country, intensifying unnecessarily the problem of the relative shortage of capital. However, if the productive skill of these immigrants is higher, then the case is different. In countries which must assimilate better methods of agricultural or industrial technique, immigrants with such skill would be of considerable usefulness, as has been shown by past experience. This experience has also shown that within the mass of immigrants not only are there efficient labourers who tend to raise the average level of productivity, but that many of these labourers have since become entrepreneurs, exercising considerable influence in the orientation and the rythm of economic development. However, immigration likewise essentially involves a problem of increasing capital, as do all problems of economic development. The employment of every workers generally calls for an increment in capital and, if the present capital availabilities are inadequate to effect a satisfactory rate of absorption of the surplus labour in primary production, this same capital could hardly absorb immigrants. Immigration therefore depends on a greater prior increase of available capital if self-defeating results are to be avoided. It should be remembered, at the same time, that the capital requirements for foreign immigration is lower than that generally needed for internal migration, since in the latter case capital is required not only to free labour from primary occupations, but also to re-employ it in the secondary activities. The cost of freeing labour does not arise in regard to foreign immigrants. Moreover, if the

/productivity of

productivity of the immigrant is higher than that of the domestic worker and contributes to raising the general level of productivity, the resulting increase to real income will exercise a favourable influence on the formation of a greater volume of capital, in the future, to the evident advantage of economic development. 1/

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1/ The problem will be dealt with at greater length in the Report on Immigration and Economic Development, which is being prepared by the Committee for Economic Development and Immigration of ECLA, United Nations.

CHAPTER IV. PRELIMINARY DISCUSSION OF THE  
ELEMENTS OF A PROGRAMME OF ECONOMIC DEVELOPMENT

I. Contents and Aims of a Programme

Division of this Chapter

1. The general considerations contained in the preceding chapters will now be set aside in order to discuss the concrete elements of a programme of development which will be divided, for clarity, into two parts.

In the first part, it is proposed to examine the contents of a programme. It will embrace on the one hand the examination of all public investments and the assessment of the investment requirements of private economic activity. On the other hand, it will also be necessary to consider the government measures directly connected with the execution of the programme, together with others which, though not so directly linked exercise considerable influence on economic development.

An analysis will then be made of the aims which a programme should have in terms of the obstacles which hinder development, the disequilibria which perturb it and the other economic problems which require urgent solution. The immediate aims should be contained in an initial programme (covering a span of four to six years) which would enable a country to strengthen its economy and give it the necessary consistency to enter upon a second phase of orderly economic development. This latter stage also calls for the drawing of a programme, only the broad outlines of which may be established when the initial programme is studied.

Having discussed the aims of the initial programme, its relation to individual projects which must be completed will then be analyzed, together with any likely alternatives. This does not imply that before these aims can be taken into account they must be definitely determined. There is always a series of pending projects and ideas to meet these obstacles, disequilibria and other problems which arise in a country's economy; the objectives could not be determined without considering these pending projects as a possible means of practical action. However, it would be unwise to examine any of these in detail, before determining whether their inclusion in the programme is justified.

/The second part

The second part of this chapter deals with the programme of investment and the assessment of its effects. Reference is first made to the estimate of the necessary investments, of the available domestic resources and of the essential foreign investment with which the latter must be supplemented.

Subsequently, the effects of a programme of public and private investment on the growth of production, real income and demand, will be considered. It will thus be possible to ascertain the degree of consistency of such a programme. With this object in view it will likewise be necessary to consider the compatibility of development in different branches of economic activity, both from the domestic point of view, taking into account their reciprocal relations and the employment of human labour, and from the foreign standpoint; in the relationship of these activities to the Balance of Payments. Where the desired compatibility does not obtain, the necessary readjustments, which must be made in order to achieve it, will be discussed.

Next, emphasis is laid on the need to make a general assessment of the programme, in order to determine to what extent and in what manner its fundamental aim, namely, the raising of the standard of living of the population, has been achieved.

Lastly, the duration of the initial programme will be considered together with its relationship to a subsequent programme and the measures which it would be advisable to adopt in order to have sufficient time to draw the latter.

Among these measures, special attention is given in a third part of this chapter to the investigation of natural resources, to technical research, the preparation of instruments of analysis for the problems of development and the training of economists to study and carry out the programmes.

#### Universality of the contents of a Programme

2. The discussion of these various aspects will begin with a consideration of the contents of the programme. It was pointed out that a programme should include all public and private investments but this, as has already been shown elsewhere, does not imply that the Government should intervene in the making of the latter. There are various ponderable motives for attributing this quality of universality to the programme.

a) It is essential

a) It is essential to determine the total capital requirements for the period covered by the initial programme of development and to compare this total with the probable amount of available resources, which are necessarily limited. Whilst not interfering with the more detailed analysis to be made of the aims of the programme, this will give a general idea of the relationship existing between the various types of investments, especially between those diverted to public works and which do not affect production directly and government investments, designed to increase production and those which it is believed should be met by private sources, in view of the incentives and opportunities offered by the programme.

Were the total of investments not envisaged in that manner, the execution of the whole programme of development itself might be seriously hampered. If certain State investments were not foreseen in the programme, their subsequent fulfilment would draw on resources required for other purposes to which the programme ascribes considerable importance. The same applies to public investments since not infrequently, in some Latin American countries, it has been observed that some of these investments have been made to the detriment of other private investments which, because of their economic significance should have been granted priority.

b) It is essential to foresee the consequences of these investments on the different aspects of the country's economy in order to determine the degree of consistency of the programme. This is not only because certain investments not included in the programme might absorb resources intended for other investments, but by not fulfilling the aims of the latter, either disequilibrium or certain domestic or foreign maladjustments may be created or allowed to prevail which are in contradiction with the objectives of the programme.

c) The aforementioned reasons would be sufficient to justify the universality of the programme from the national point of view. There are other considerations of an international nature, however, which must also be taken into account. In order that the economic development of Latin American countries may progressively reduce the wide differences between the prevailing level of their real income and that of the more advanced countries, a substantial amount of foreign investment will be required.

/If the needs

If the needs of the other under-developed countries are considered, a very high sum will be obtained, which, apart from other considerations, calls for strict criteria of distribution, in order to obtain the best results possible in the economic development of the various countries. It is evident that a country which does not have to resort to this type of loan does not need to adjust its own investments to such criteria. However, once it becomes a question of international co-operation, it is evident that the contribution of international resources will have to depend on a well-drawn plan. There would be no justification for the need of such resources if a portion of domestic savings were invested in activities of very doubtful collective utility or if the aims of the projected investments were other than those of economic development, or, alternatively, were not directed to eliminating the difficulties encountered in such development.

#### Linking up of the Programme with other Government Measures

3. The following considerations must evidently be limited to the plan of investment in the programme. It must on the one hand also include the official measures which should be adopted in order to execute this programme and on the other it must determine the compatibility of the aims of the programme and the means of carrying it out together with other aspects of government action.

Government measures are principally connected with private economic activity. The State may determine exactly which direct investments it is ready to make directly, but as regards private enterprise the State must limit itself to taking various measures which will stimulate investment in certain sectors and discourage it in others. These measures will have to correspond closely to the goals of the programme. At all events, its planning offers an opportunity of reviewing all the measures which directly influence economic activity, suspending some and modifying others, besides establishing additional measures which would appear desirable. Accordingly, it is necessary to consider:

a) The tariff and exchange policies, and the manner in which both affect the development of production, especially of the sectors with which the programme deals specifically;

/ b) The effect of

- b) The effect of taxation on investments;
- c) The different media of intervention which directly influence economic activity, especially in regard to price controls and the direct regulation of production.

In order to assess the effect of these measures, it is necessary to consider the various forces which in fact operate, in order not to lose touch with actual conditions. The co-operation of private economic activity is therefore indispensable, both in the discussion and planning of the programme and in its ultimate completion.

Other aspects of government action, even when they do not affect any branch of economic activity directly, may have considerable effect on the direction and intensity of development. It is true that by reason of their nature, these aspects can hardly be included in the programme, but the planners must take into account the possible effects of certain government measures, in order to ascertain whether those measures are compatible with one another, and with the objectives of the programme. Public expenditure is one of the most significant factors in this connection; it is obvious that the domestic resources, called upon to cover the investment set forth in the programme, are not independent of the volume of public expenditures; on the contrary those resources presuppose a given rate of increase of the latter. If the State proposes to increase public expenditure it will necessarily be to the detriment of those private investments, and it is therefore necessary to adjust the latter's amount and distribution in order that they should be compatible with public expenditure, unless these are readjusted instead. One of the beneficial effects deriving from a programme in the course of time is precisely the definition of the limit which the real resources of a country set on the various possibilities of expenditure and investment. Another of the beneficial effects is the demonstration that beyond certain limits, the making of certain investments necessarily implies the postponing of others. It is evident that when a programme is decided upon it is necessary to be fully aware of its significance and its consequences.



### The Determination of the Goals

4. A line must be drawn between the immediate objectives of economic development in a country and the goals to be achieved in the more distant future. The former should be contained in an initial programme, designed to solve the more pressing problems of development and to prepare the country to undertake, at a later date, a programme of regular growth in which its natural resources will be utilized in an orderly manner. The duration of such an initial programme may vary from four and six years for reasons set forth below.

During the past two decades development in nearly all the Latin American countries which has been subjected to the formidable pressure of international events has given rise to a series of critical problems in the various sectors of economic activity. Exhaustive analyses of all the aspects of a country's economy and its possibilities are not essential for drawing an initial programme directed to solution of these problems. The lack of extensive knowledge regarding the natural resources of a country, the inadequacy and inaccuracy of its statistics and the shortage of experts to plan and carry out the projects often hamper the drawing of a programme, if the latter is considered as a precise and very complete statement of what must be done in each branch of economic activity; but even the more advanced countries would encounter difficulties in attempting to draw up such a programme. What is required is a plan in which the common sense of those experienced in technical matters and economics in each country must exercise a preponderant influence.

In the majority of these countries, a series of ideas, undertakings and projects which have sprung from the critical situations of real life itself, are in fact pending. It is logical that solutions have been sought in terms of resources, or recognized possibilities, rather than in a complete analysis of possibilities which will necessarily entail the spending of considerable time in their preparation. These ideas, undertakings and projects, representing the development requirements of a country, may constitute valuable informative elements for the economists entrusted with the establishing of fundamental goals of the programme. Once these have been defined, engineers and other experts should

/examine the

examine the undertakings and projects, from the technical standpoint, to ascertain whether they are in accordance with the aforesaid objectives. This does not imply that the work of the economists and technical experts must be entirely separate; on the contrary, it is essential that concerted and constant control be exercised in regard to these problems, in order to avoid delays and expensive diversions. It may be that certain objectives which appear desirable to economists are utterly impracticable from the technical point of view, by reason of difficulties which they entailed, or that certain technical solutions presented by the engineers may involve difficulties or economic repercussions which makes their adoption inadvisable.

Certain concrete conclusions can therefore be drawn which, though they do not cover all the aspects that should be included in a future programme of regular development, are nevertheless adequate for the establishment of an initial programme. For instance in order to make certain investments in hydro-electric power, it is not necessary to know accurately all the potentialities of a country in that field. It is sufficient to know that in the economic region under consideration, this is the best project, that from the technical standpoint it has been well drawn up and that it solves a real problem of energy, or of water supply for agriculture, and that at the same time, it is effectively contributing to diminish the pressure on the Balance of Payments. In the same way, when a country has a persistent disequilibrium in its Balance of Payments and when there is a possibility of substituting certain imports, at a reasonable cost, by using domestic raw material, there is no need to study all the existing possibilities of substitution and it is not necessary to make an exhaustive investigation of the country's resources before making any decision. Common sense should prevail in this case, together with a consideration of great psychological value: nothing is so encouraging to the men entrusted with the task of drawing up a programme, or of carrying it out, as the clear conviction that their efforts have not been in vain, that the initial programme will be put into operation without the need to spend several years in preliminary study. The old saying that "the load settles itself on the way"<sup>1/</sup> is of great practical value in this connection, provided that

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<sup>1/</sup> Argentine proverb "La carga se arregla andando".

the point of destination is known, that is, provided the goals of an initial programme of development have been determined.

Moreover, once these goals have been established, it would be possible to begin work on certain isolated projects related to them, even when the drawing up of other projects and the initial programme itself have not yet been completed. There is, however, a danger which must be avoided. The undertaking of certain projects, before completing the general outline of the initial programme might suggest that such a programme is dispensable and that it would be sufficient to add new projects in order to attain the aims pursued. This would be a grave mistake. If this method were adopted, without taking into account the critical requirements of an economy, that is, the needs which already exist and those which are likely to arise in the course of a few years, as a result of development itself, the same maladjustments and disequilibria would occur as have marked the course of economic development in the Latin American countries, to the detriment of their greater economic expansion.

In order to avoid this danger, even when the initial programme has not yet been completed, the urgent projects, to be undertaken without delay, must be considered together with other government investments and with the more important measures affecting private economic activity. It will thus be possible to obtain a preliminary selective idea and to establish a basic order of priorities for the best utilization of the scarce resources available. Whilst this is taking place, the work of research must be actively pursued in order to establish the general programme, which should include all the investment projects and measures influencing the course of private economic activity, as has been stated above.

5. It has been pointed out that the aims of the initial programme should be determined in terms of the most pressing obstacles to the regular and intensive economic growth of a country, and in relation to the difficulties and disequilibria encountered therein. To judge by the recent experience of the Latin American countries, the following points should be considered in establishing the aims of an economic programme, to the exclusion of other important aspects, such as Public Health, for instance, for which provision should be made in another series of measures and which, in a

/well concerted

well concerted programme, should not be overlooked, as has already been indicated elsewhere.

Fundamental obstacles in basic sectors of the economy, principally concerned with energy and transport, which hinder the development of other activities.

A deficient capacity to import capital goods and other producer goods required for development, besides the essential articles required by the country, and the resultant tendency to external disequilibrium.

Vulnerability of the economy to external fluctuations and contingencies.

Difficulties in the development of agriculture.

Difficulties in the development of other activities directed to the domestic market.

Public works requirements not yet undertaken.

Building requirements not yet undertaken.

Excessive concentration of the industrial population.

Deficient productivity.

Inflation.

Now let us consider how the objectives of the programme spring from an analysis of the foregoing problems.

#### Difficulties in the Basic Sectors of Economy.

6. On many occasions, the facts have shown more than once that in the Latin American countries the elimination of the obstacles to the development of energy and transport is of the greatest importance to the development of the remaining economic activities. These obstacles exist in most countries and it can therefore be understood why so much importance is ascribed to them in plans of development.

Generally speaking, the expansion of energy consumption has been intense though the sources of supply have not increased at the same rate. This may have occurred either because these installations must be built a long while before they are required, the necessary foresight for this having lacked; or, because of import difficulties, or because existing resources were inadequate, whilst those available were employed in solving immediate problems, at the cost of future requirements.

Alternatively, resources may have been applied in investments which

/should have been

should have been postponed, or simply not made at all, in order to provide funds for other fundamental requirements. These causes, separately or jointly, account for the critical conditions prevailing in many cases.

Thus, the primary goal of an energy programme should be to eliminate present day energy deficiencies and, subsequently, to undertake the development of these resources, so that they correspond to the probable requirements of a country at the close of the initial programme, and in the following years. It would then be necessary to estimate the probable requirements taking into account past consumption and the increment of demand caused by the growth of the population and the effects of the programme itself. In some cases, the programme will contain elements which cannot be deliberately modified, since they depend on the measure in which the development of industry, transport and other activities has been estimated, and on their respective energy requirements. In other cases, however, the estimate will depend upon the criterion adopted for the satisfaction of certain present and future needs. Thus, in some countries, a significant proportion of increased consumption of electricity arises from the development of new uses, or from the undue emphasis laid on extending electricity services to outlying rural populations, with the praiseworthy purpose of furthering their progress, but with no immediate economic aim, whereas adequate resources were lacking to meet industrial needs. In other words, in a plan of energy development, it is as important to determine the most suitable forms of expanding resources as to establish the most economic patterns of consumption.

Having determined energy requirements, the programme should investigate the means of supplying them. The subject is indeed complex and various considerations must be weighed, such as the energy resources of a country, the disequilibrium in its Balance of Payments, its external vulnerability and the limitations of available capital.

In view of the above, it may be said that the problem of energy generally presents the following aspects in Latin American countries:

- a) Utilization of domestic sources of energy (principally hydro-electric power, coal and petroleum), with direct savings in fuel imports and the lessening of the country's vulnerability to external factors;
- b) Additional savings in fuel imports by the installation of petroleum refineries, and adequate transport of the fuel (domestic fleet of tankers /and oil pipe-lines);

and oil pipe-lines);

- c) Savings in the consumption of energy by the substitution of one type of energy for another (for instance, the electrification of the railways);
- d) Savings in fuel consumption by improved utilization.

The experience of the Latin American countries has shown that when a country imports a considerable volume of fuel, foreign contingencies can affect its economy sharply. Moreover, since, as a rule, the intensive rise of consumption is strongly reflected on imports, it is easy to understand the tendency to give priority to the need for tapping domestic sources of energy. As was stated in Chapter II, in considering the economic advantage of a domestic industry replacing imports, the cost of substitution, though of outstanding importance, is not the determining factor. This latter lies in the results obtained by comparing the increment of production attained by investing capital in a given industry with that which might be obtained in other substitute industries and not with the rate of productivity obtaining in other countries. In the present instance, the vulnerability of a country which imports a large proportion of its energy might justify domestic production, though the necessary investments are less productive than others which might be made. However, this difference must be kept in mind, in order to make objective decisions.

As to the best means of reducing imports, referred to under Section b) above, a country will remain vulnerable as regards its supply of fuels though not to the same extent as previously; the same criterion must be adopted as will be seen later in solving this difficulty as in other cases of industries producing substitutes of imports.

Questions of foreign exchange and productivity enter into the problem of reducing energy consumption by substituting one source of energy for another. When an attempt is made to replace foreign fuel by the utilization of domestic energy, or to reduce the consumption of imported fuel, the same problem arises as before. But it may also be a case of substituting one domestic source for another, as, for instance, petroleum for coal, or wood for any of them or hydro-electric power on the railways for any of the other fuels. Here we have an example of

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the many alternative solutions which must be studied in drawing up a programme. It would thus be necessary to determine whether the capital invested in electrification yields a net increase of production or a reduction of costs which would be greater than could be obtained by investing in other domestic activities; moreover, the problem must be considered in the light of its repercussions on the Balance of Payments, as will be explained shortly.

There is ample evidence to show that much can be done as regards the saving of energy by better utilization of fuel in Latin America. Such savings generally call for capital investments besides requiring the extension of improved technical methods; it is likely that the yield of these investments will be proportionately great.

7. There are also various aspects of the basic sector of transport which must be considered:

a) The replacement of material. This is one of the most pressing needs in nearly all the Latin American countries. The small capacity to import in the 'thirties and the difficulties of obtaining imports during the war, together with the subsequent preference granted to imports that would meet the most urgent needs, and finally the substantial resources required for the replacement of material are the principal causes of the prevailing situation.

There have also been delays in the replacement of motor vehicle equipment and in the expansion of this type of transport, but the capital required for such investments is generally smaller.

Apart from calculating the investments required to obtain normal and efficient operation of the transport system, it would also be necessary to estimate the capital outlay required for the normal replacements which must be made later, in order to investigate the possible ways of meeting this demand.

b) The expansion of the transport system, both to meet the increased

/traffic requirements

traffic requirements and to extend the network to other regions, thus promoting their development. In this connection various solutions must be examined, including the development of air transport, taking into account its productivity and its incidence on the Balance of Payments, apart from other technical and economic considerations. The studies which this involves are generally prolonged and, except in emergencies, or when the establishment of new lines is essential in order to achieve other goals of the initial programme, it would be advisable to include this problem in the plan for future development.

c) The reorganization of the transport system. Such reorganization is essential in many cases because, due to the deficiency of the material and to the overloading arising from increased traffic, and for other reasons also, productivity has decreased markedly and there is often an excess of labour, especially in railway transport.

d) The manufacture of replacements and certain types of transport material. The immense replacement requirements and estimates of its future increase have led certain countries to study the installation of plants for the manufacture of such material, and the expansion of the existing factories. The question of vulnerability arises here, together with that of productivity. In view of the development of the iron and steel and metallurgical industries in certain countries, it is quite possible that solutions will be reached which include the supply of replacement requirements and transport material for several countries.

/The Substitution of



The Substitution of Imports and External Disequilibrium

8. There is no need to refer again to the external disequilibrium caused by economic development itself. In the majority of cases, this disequilibrium recurred after the war and even though it was corrected, it is likely to reappear in the course of development, if measures are not taken to prevent it. One of the aims of an initial programme should therefore be to ensure that at its close this programme will have effected the complete elimination of disequilibrium. The subsequent programme should likewise ensure that disequilibrium will not occur in the future.

These measures should be designed to increase exports and effect through domestic production the required alterations in the structure of imports both as regards industrial and agricultural imports. In the measure in which the Latin American countries can increase their exports without the risk of deteriorating external prices, as was shown in Chapter II, this would be the most convenient form of indirectly meeting the consumption and investment requirements of the population. However, the experience of these countries shows that, at best, expansion in these activities is inadequate for them to absorb productively surplus labour force and its vegetative increment. Nevertheless, since the efficiency of a programme of development depends largely on a country's capacity to import and to cover the services of the foreign investments essential for such development, a programme should begin by a careful analysis of the possibilities of increasing exports.

9. In view of the growth of a country, the calculation of the future development of imports is equally as important as the consideration of possible substitutions for current imports, when the programme is being planned.

In a number of the Latin American countries, post-war disequilibrium in the Balance of Payments has recently been eliminated by the introduction of restrictive measures and the increase of exports. The problem is nevertheless far from having been solved and the continuity of growth may sooner or later determine its reappearance. Hence the need to consider the elimination of disequilibrium among the principal aims of a programme.

/In drawing up

In drawing up such a programme, the probable expansion of imports by the end of the initial part must, first of all, be determined together with the disequilibrium to which they give rise in the Balance of Payments. This must be done before considering compatibilities, which will be studied later, when it will be ascertained among other things whether the expansion of imports is commensurate to the foreign resources of a country. In the latter event, the effects of a programme will have to be assessed, once it has been drawn up, but for the present, let us consider the elements which the programme should contain.

An assumption will be made, to begin with, and it will be adjusted by the method of trial and error, that is, by successive approximations to reality. This assumption concerns the probable magnitude of the National Income at the close of the initial period, estimating it in function of the human labour which will have to be employed, the capital available to do the latter and the increase which may be expected in average productivity. Then the growth of imports caused by this increment of income must be estimated, taking into account the tendencies which are in operation in the more important groups. It will also be necessary to touch upon the labour required to establish the above-mentioned compatibility, but merely in a preliminary manner. The resulting figure and the examination of other items in the Balance of Payments will enable us to obtain some idea of the magnitude of the disequilibrium. This figure is merely indicative, since beyond a given limit, certain reactions take place which hamper the extension of disequilibrium. However, this figure does indicate approximately the volume of imports for which substitutes must be found in order that development may take place, in accordance with the hypothesis about development stated before.

It is evident that the volume of production which must be developed for this purpose will have to be greater than the volume being replaced. If, in some cases, the entire value of goods formerly imported is produced domestically, including the use of domestic capital equipment, there are other cases in which it will be necessary to import the raw material and to renew constantly the machinery imported for its manufacture.

/Having thus

Having thus ascertained the magnitude of probable disequilibrium, the forms of production which might assist in eliminating it must be sought. If the saving of foreign exchange is relied upon exclusively as term of reference, it would logically be necessary to select forms of production which provide the greatest proportion of savings in imports, in relation to their total value. This would be a unilateral solution of the problem, because the productivity of the capital employed would have been neglected. It might well be that investments which produce such savings in certain sectors of production are not those which provide the greatest increment in the net product. It is possible that other investments might provide the maximum increment, but these would not effect the desired reduction in foreign exchange expenditure, owing to the greater proportion of imports required for production. It is therefore necessary to find a combination of different investments which will give rise to the greatest increment of production compatible with the said saving of foreign exchange. This will not be the maximum increment, but it will be as large as conditions permit.

However these conditions often vary. The assumption was based on a given amount of available capital and human labour. If the amount of capital were increased and more labour freed from primary production, or were labour intended for other purposes employed in substitutive production, an optimum increment to production combined with the desired savings of foreign exchange could perhaps be achieved.

All these estimates are complex and require detailed data which is not always available. It would however be advisable, at least in the case of the more important investments, to estimate their economic significance in this manner, taking into account other available illustrative data.

In analyzing certain industries, allowance must be made for the fact that they form part of an economic unit and that they are essential to the development of the unit. Even assuming that productivity of capital and foreign exchange savings is lower than in other investments, it would nevertheless be advisable to invest in these industries in order to achieve better integration and to render the unit as a whole less vulnerable to external fluctuations.

/The time factor

The time factor must likewise be considered. Certain industries, which are established with a view to replacing imports, require some time before achieving satisfactory levels of productivity, either because greater experience is gained in them, or because of the savings inherent to the increase in production. As was pointed out in the first chapter, a programme implies an act of foresight and the decisions on which it depends must be made with a view to the distant future.

In estimating the degree of disequilibrium in the Balance of Payments, in the last year covered by the programme, it was implicitly assumed that a prior analysis had been made of all other imports which must be wholly or partially dispensed with in order to increase as much as possible producer goods imports. Taxation can play an important role in this connexion, since it serves the dual purpose of restricting imports and absorbing with ease a part of the expenditure of the high income groups, later applying this revenue to economic development.

These restrictions might well stimulate the development of domestic production of the same articles, thus foregoing one of the effects which it is desirable to obtain, diverting at the same time investments of a more useful social nature. These restrictions would therefore have to be supplemented by internal taxes which would discourage this type of activity.

/Foreign Vulnerability

### Foreign Vulnerability

10. In the course of the first analysis of economic development presented by the Secretariat to the Commission, <sup>1/</sup> a general analysis was made of the possibility of decreasing, if not of eliminating through internal development the extreme vulnerability of Latin American countries to external fluctuations and contingencies. This subject will have to be considered in each concrete example, in the light of the country's resources and the basic elements of its economy.

From the standpoint of its cyclical vulnerability, a country should aim to develop domestic production and the substitution of imports, so that in the event of a sharp decline of exports, the levels of employment and essential current economic activity for general consumption may be maintained. This objective cannot be achieved if imports of raw materials and essential goods are not reduced to a level that can be covered by the minimum exports which might be made during the cyclical downswing (taking into account other income and the financial charges of foreign capital together with other debits). The margin of fluctuation of imports must therefore preferentially include non-essentials capital and other durable goods, and certain essential products, the importation of which may be postponed until better conditions prevail. This must be done in order to ensure the minimum volume of imports of essential commodities.

It is evident that if foreign investments are made in accordance with an anti-cyclical policy, these fluctuations of imports of capital goods could be avoided, or at least attenuated, thus enabling a greater regularity to be achieved in the process of economic development.

From the point of view of their vulnerability to foreign contingencies, such as wars and rearmament, experience has proved the existence of many critical points in each of the Latin American countries, such as the shortage of certain chemicals or replacements which can affect a large part of industry and imperil its development. There is

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<sup>1/</sup> The Economic development of Latin America and Some of Its Principal Problems, Part II, Economic Commission for Latin America, United Nations.

therefore justification for domestic production of these goods, even when the investment of capital gives rise to a lower increment of production than in other fields of economic activity. It would be equivalent to cost incurred in the payment of an insurance premium which experience teaches us it is wise to hold.

#### Agricultural Development

11. The serious problem of the insufficient diet in a large number of Latin American countries demands that a prominent position be given to agriculture in programmes of economic development. Here again, a dividing line must be drawn between matters which require immediate solution in an initial programme, and others of slower development. The initial programme should therefore include the following points:

- a) Measures whereby productivity can be increased in a relatively short period, by simple improvements in the methods of cultivation and by the utilization of more appropriate implements;
- b) A better utilization of the land and water available;
- c) Immediate expansion of the arable area in order to solve urgent needs;
- d) Participation of agriculture in the substitution of imports. At this point the problem of the alternative utilization of capital and human labour, which arises in the fields of energy, transports and industry, also occurs in connexion with the utilization of the land. If there is a shortage of available land and it is necessary to invest substantially in order to extend the arable area and to obtain a substitutive production, it must be ascertained whether the capital thus employed yields a greater increment in production than if it were invested in industry, before adopting the former alternative, and without ignoring considerations of a different order, which may also bear upon this decision;
- e) The possibility of increasing production for export.
- f) The possibility of increasing production of certain critical commodities for the domestic market besides those mentioned in the discussion of imports;
- g) Mechanization, in the measure in which agriculture itself and

/other sectors

other sectors of economic activity can absorb the labour thus unemployed, or when the efficient cultivation of new lands, the shortage of agricultural labour in certain regions or the individual characteristics of crops render it necessary;

h) Investments in order to facilitate warehousing and transport of agricultural products.

It will be noted that in the course of this enumeration, the structural problems of agriculture have been relegated to a future programme. This has been done because, with the exception of cases which should always be considered separately, the structural problems involve a protracted investigation that cannot be effected in the relatively short period allowed for the drawing up of the initial programme. Furthermore, the measures designed to solve these problems do not generally bring positive results immediately, but require a longer period than the duration of the initial programme.

#### The Development of Other Domestic Activities

12. In addition to industrial production aimed at substituting imports, there may be other sectors of industry, already satisfying total or partial domestic demand, which encounter obstacles in their development, thus causing shortages of their production in the present or in the foreseeable future. In considering them, it would be necessary to weigh the advantage of investing capital in these activities rather than in others directed to reducing imports or increasing exports. On the whole, it would seem that the latter should be preferred, since they increase the capacity to import capital goods and may later develop the former activities. Nevertheless, there may be social considerations which are of more importance than these in certain specific cases.

#### Public Works

13. A mere glance at the majority, if not all of the Latin American countries, shows that there is a considerable field for investments in public works and explains the importance of this topic in the preoccupation of governments. It is therefore evident that the initial programme should include the most essential of these projects. However, there is a fundamental consideration which must not be lost sight of, namely, that  
/the most

the most pressing aim is the increase of production and real income, and that the more capital and labour are concentrated in attaining this objective, at the cost of other less urgent needs, the greater will be the possibility of fulfilling the others in the future.

Undoubtedly, the degree of urgency of certain public works is comparable to the degree of deficiency in the basic sectors mentioned above. In these cases, therefore, they deserve to be granted a high priority. There are other projects, however, which it would evidently be wiser to postpone, or at least to limit in extent for these reasons.

It has been found that certain countries having a disequilibrium in their Balance of Payments, as a result of their failure to make sufficient investments aimed at the substitution of imports, or because they have undergone a serious shortage of certain foodstuffs when investments in agriculture were neglected, have invested an appreciable part of their meager savings in works which, under the circumstances, were inadvisable.

#### Building

14. Attention has often been drawn to the large proportion of investments which the Latin American countries make in building. This observation is perhaps derived from the type of luxury building which is characteristic of the majority of constructions. In nearly all Latin American countries, there is a serious shortage of housing, especially in the urban centres, where industrialization and development of the civil service have drawn a large number of people from the rural areas. This fact more than others shows that the recent process of growth has brought to light social disparities. Whereas the people mentioned previously had more than ample living space in the rural districts, partly compensating the precariousness of their dwellings, they often surrendered this for the impressive conditions of promiscuity and crowding in which most of them live in the cities.

Therefore housing for the low income groups should be given considerable attention in programmes of development. This is one of the most attractive and also one of the most difficult fields of planning and one in which the greatest errors have been made. Because of its magnitude this problem cannot be solved over the short run, and one is

/therefore



therefore inclined to enquire whether the most logical course would not lie in concentrating the bulk of the country's resources in first increasing real income, to attain later the margin of savings which would permit the undertaking of an ambitious housing programme for the bulk of the population. However, apart from the funds which can be invested for this purpose in the initial programme, it would be advisable to analyze the following points:

- a) The extent of the housing shortage;
- b) The number of dwellings which should be completed yearly, in accordance with the programme of economic development itself;
- c) The various alternative solutions and their cost;
- d) A more economic organization of the building industry, with a view to establishing a building programme;
- e) Measures to stimulate private interest in low cost housing.

#### Excessive Concentration of the Industrial Population

15. Reference has just been made to the concentration of the population in the urban areas. Apart from the social consequences of this phenomenon, the direct and indirect economic effects are of unquestionable importance, since the displacement of the population increases investment requirements for a series of services, such as transport, which would be much smaller if industry did not tend to concentrate as it has **done**. This problem obviously cannot be solved by the initial programme. But the situation should not be rendered more difficult by such a programme. An attempt should be made to stimulate decentralization of the new activities and especially of the industries developed under its auspices. It is therefore necessary to begin the analysis by considering the measures which a long-term programme should include in order to check the present tendency to over-concentration of the population.

#### Deficient Productivity

16. It is well-known that a considerable part of the increase of productivity in Latin America was obtained by the migration to industrial activities and other associated sectors of the labour unemployed in primary activities by technical progress. It is therefore necessary to intensify investment in the latter, in order to free under-employed /labour and also

labour and also to increase investment so as to absorb this same labour in industry.

This process must continue until a certain balance can be obtained between the levels of productivity in primary production and in industry. Nevertheless, there is within certain limits a possibility of freeing labour from both activities by means of a relatively small capital investment. The greater part of this capital would only be required for the absorption of displaced labour. In fact, in industry, to judge by the conclusions drawn in the course of the Textile Study, <sup>1/</sup> appreciable increments to productivity could be made by modification of certain working methods in organization and administration. The same might be said of agriculture, as is shown by the results obtained from certain technical improvements, such as hybrid seeds and pesticides, which are relatively inexpensive. There are countries where irrigated land is scarce, but where better utilization of water and land would give rise to substantial increases in production. Similar conclusions can also be drawn with regard to transport and other activities.

There is also the possibility of rapidly obtaining such increments in productivity by removing the economic and psychological barriers, which in certain cases are formidable and greatly affect productivity. It is nevertheless essential to absorb displaced labour into new activities, or in the expansion of established occupations. Hence, the close relationship between this and other aims of the programme of economic development.

The effect of this increase in productivity will enable an improvement to be made in the real income of labour occupied in the activities where productivity is raised, thus providing a powerful incentive to modify working methods and also to increase the margin of essential savings for the increment of investment which is required for the long-term programme. The cooperation of trade unions would be invaluable in achieving these objectives.

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1/ "Productivity of Labour in the Cotton Textile Industry of Five Latin American Countries", Economic Commission for Latin America, United Nations, (Document E/CN.12/219).

If this were possible, labour saving investments in the existing agricultural or industrial units, could only be justified generally, with certain exceptions, when the labour freed by less costly methods mentioned above has been absorbed, together with the labour seasonally employed in low wage occupations.

Financing of Development: Inflation

17. It would be redundant to repeat the reasons for considering that the solution of the problem of inflation is one of the most important objectives of the initial programme of development. In reality, it is only within a programme of this nature that it is possible to include a plan to stem inflation in the Latin American countries, since isolated measures would prove useless and would give rise to disturbances that it would be advisable to prevent.

If inflation is caused by the excess of investments over available savings, it is not sufficient to offer the simple formula of reducing the former in order to suppress inflation. Firstly, because this would involve domestic unemployment of factors which it is extremely difficult, if not impossible, to reabsorb spontaneously; secondly, if the fundamental purpose of economic development is to increase investments, it would be paradoxical to begin by reducing investments. At all events, it would be necessary to divert investments elsewhere if they are not advantageous, but their volume should not be diminished. The solution lies in increasing domestic savings or in attracting larger amounts of foreign capital, so that the increment to real income will reach the point at which that margin of domestic savings might be increased.

If inflation has diminished its efficiency as a means of capitalization and it does not arise therefore from excessive investments, but rather from the efforts of various social groups to recover lost ground or to improve their position, then the phenomenon has acquired social and political characteristics which are extremely serious and their immediate solution does not lie exclusively in the realm of a programme of economic development. A relative increase of productivity, over a relatively short period such as that envisaged above, might contribute to creating satisfactory conditions for the solution of these more delicate aspects of the

/inflationary

inflationary problem.

#### Individual Projects

18. It has been pointed out that the planning and analysis of individual projects should only be undertaken once the objectives of the programme of economic development have been established, since, to the contrary, efforts and expenditure would have been made which may perhaps have been unnecessary. Before undertaking the programme, it would be advisable to obtain some idea of the alternative means of solving a concrete problem, in order to concentrate all efforts on the most rational of these. Costly programmes could be indicated which have been examined when other more acceptable solutions existed, involving a smaller capital outlay.

In all these projects, close co-operation should exist between the engineers and the various technicians on the one hand, and the economists responsible for the programme on the other. There is, thus, an earlier phase which consists of selecting projects during which the work should be carried out jointly. Subsequently, the planning of the programme should be carried out by the aforesaid technicians. Lastly, both groups should investigate the economic aspects of each project, their relationship to the objectives envisaged, their compatibility with other projects and their economic results.

Relationship between Different Goals of the Programme

19. The brief discussion of the various objectives of an initial programme of development shows the close association existing between them. As in every programme, an analysis of each part should be made in the light of the rest, and in preparing the analysis of the whole the interrelationships between the individual parts must be kept in mind.

Thus, the investments which it is proposed to make in order to fulfil the various objectives of the programme must be compared with one another in order to ascertain whether no alternative combination would produce better results by adding a greater increment to the national product, or would not correspond more closely to the aim of diminishing the external vulnerability of a country. Reference has already been made to this in the course of this report and the following considerations should be added in order to complete the analysis:

a) Certain types of investment might be fully justified when the basic sectors are considered independently, but it is possible that by choosing other alternatives a certain amount of capital would be saved which could be better employed in the immediate attainment of other objectives.

b) Investments in agriculture, with a view to replacing imports, should be compared with those directed to the same purpose in industry, in order to determine in what manner the investment of the scarce capital available will give rise to the greatest increment in production. This comparison should be extended to all industrial and agricultural investments, taking into account the considerations regarding vulnerability formulated above.

c) In the same way, investments for replacing equipment, in basic sectors and in industry, and for the mechanization of agriculture and other branches of primary production, should be compared in the light of the saving of labour they effect to determine whether the same objective could be attained with a smaller capital outlay aimed at improving working methods.

d) The saving of labour thus achieved should be compared with  
/the amount

the amount of labour absorbed by the investments planned in the programme.

e) Investments in public work and in building must be compared with others designed to increase production forthwith and their respective degrees of urgency, from the economic and social standpoint, must be determined.

20. In analyzing the various objectives of a programme, special attention has been drawn to the difficulties arising in the basic sectors, to disequilibrium in the Balance of Payments and to other obstacles standing in the way of development, taking into account the experience of Latin American countries in general. There are, however, specific cases in which some of these phenomena do not occur. For instance, in a few countries, there has been no chronic tendency to disequilibrium either because exports have expanded considerably, or because domestic development has been very feeble. Evidently there will be no concrete manifestations of development if domestic development is weak. Nevertheless, there might be a problem of potential development, namely, unemployed natural resources and an abundance of labour, the employment of which would give rise to characteristic problems encountered in most of the Latin American countries. There is therefore a justification for a programme of development here, though with a different emphasis on the objectives.

21. The characteristic feature of a well-planned programme is the common sense used in examining the various solutions possible and in comparing the effort which it is proposed to make in accomplishing its different objectives. It is necessary to acknowledge the complexity of the task and that the desire to obtain absolute and exact results, and to adjust the aims to over-rigid principles, would endanger the rapid execution of the programme. There are not sufficient data, nor the necessary experience, for this purpose to be fully achieved. The criteria are often questionable, and much is thus left to be determined by personal views and differences of opinion which can only be solved by inevitable compromises. A programme must necessarily be based on estimates of the future, and in this it is likewise necessary to proceed on the basis of careful hypotheses and

/flexibility of

flexibility of opinion in order to meet unforeseeable contingencies. This involves the exercise of personal judgment rather than resorting to objective methods of forecasting. Lastly, as in all practical problems, considerations of an economic social and political order exercise an appreciable influence. The social and economic factors cannot be measured by the same standards, and therefore create differences of opinion which can rarely be solved other than by compromise. However, despite this, economic considerations must always be discussed with single-mindedness and objectivity by those upon whom rests the responsibility of taking practical action. The value of a programme and the efficiency of its execution depend ultimately on the accuracy of their decisions.

## II. INVESTMENTS IN THE PROGRAMME AND THE ASSESSMENT OF ITS EFFECTS

### The Volume of Investments

22. Having defined the objectives of the initial programme, it is necessary to determine the investments which will be required in order to execute the programme in a period which is estimated between four and six years, according to the nature of the problems to be solved. In accordance with these objectives, the investments in the programme should cover the following sectors:

- a) Basic sectors: energy and transport;
- b) Export activities;
- c) Creation and development of industries to substitute imports;
- d) Creation and development of other industries;
- e) Development of agriculture;
- f) Public works undertaken by the State;
- g) Private building.

The estimate of the investment requirements may be made accurately in the specific projects of the programme. On the other hand, since the programme is only intended to offer incentives to private enterprise,

/but not make

but not make direct investments therein, the estimate of investment requirements is hampered by the prevailing lack of reliable statistics. It will be some years before these have been perfected and meanwhile it will be necessary to resort to sampling, in order to collect data that will permit an approximate evaluation of these requirements. The analysis of data on capital goods imports, in cases where these show useful details, is a good basis for these estimates, especially if additional data is available regarding domestic manufacture of capital goods.

Having established the amount to be invested in the initial programme throughout the period of its duration and the echelonning of the expenditure involved, it will be necessary to determine to what extent domestic savings can be relied upon and what amount of foreign capital will be required in order to supplement them. Experience shows that it would not be wise to deviate from present estimates of domestic savings in the initial programme, since both the measures to increase such savings and the increment to income will be gradual and it would be more convenient to rely on these effects in the subsequent programme. This does not imply that these measures should not be considered in the initial programme, but, with certain exceptions, the possible increases of savings should be employed to amplify the initial programme throughout the course of its fulfilment, rather than as a source of funds for essential investments.

23. The determination of the amount of supplementary foreign capital required is subject to factors which in their majority do not depend on the decision of one country. Nevertheless, the existence of a programme would have the advantage of presenting the problem of development in its own terms to the authorities who should make the decisions. If it can be proven that the estimated investments are necessary in order that the objectives which could hardly be considered over-ambitious should be attained, and that the programme is rational and cautious, insofar as the distribution of investments is concerned, and if it can likewise be shown that the substitution of imports and the increase of exports is sufficient to cover the servicing of foreign capital, the  
/probabilities of



probabilities of obtaining the necessary resources will improve considerably in contrast with the present position, when it is difficult to estimate the effect of isolated projects on the future course of the economy.

Moreover, in determining the initial amount of foreign investments in a well-organized programme, it must not be forgotten that such a programme involves an appreciable increment to the income of a country, thus placing it in a better position to obtain the investments with which to carry out future programmes, whereby the flow of foreign capital can be gradually diminished.

There is no reason to believe that foreign investments made with a view to increasing the level of productivity and improving the position of the Balance of Payments or maintaining its equilibrium, would constitute a heavy financial burden for the countries supplying the funds. If the rate of interest is reasonable and the terms adequate to the type of physical asset obtained with the investment, there will be few cases in Latin America in which additional resources would be called upon to cover investment requirements. This does not include expenditure in technical co-operation where, because of the individual characteristics of the problem, the expediency is recognized of employing public funds, which are not subject to the normal system of financial transactions, in order that the aims envisaged may be attained.

24. In the planning of this programme, progress is made by a successive series of trials and approximations until the correct total of the various investments is found and the investments are compatible with one another. However, we are still in the initial phase of the programme. The aims have been partially discussed, and the indispensable investments for its execution have been studied. It was necessary to adopt a point of reference, that is, the expansion of production and of the National

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the other two points. Reference has already been made to the import requirements for replacing equipment in the basic sectors, to which must be added industrial and agricultural machinery.

development of the various activities is uniform, and whether it has maintained its relationship to the growth of state services. In other words, it is necessary to ascertain whether their results are reciprocally compatible. They are hardly likely to be, since though the general picture has not been neglected, nor the relationship between the various elements of the programme, the tasks of achieving each of the objectives must be carried out independently. The necessary corrections and adjustments must be introduced in order that having attained such compatibility, the partial elements may be adapted into a well concerted whole. Otherwise there would not be a programme but merely a collection of individual projects, as has been pointed out in the first chapter.

The tasks of the second stage will now be discussed. In the first place, it is necessary to determine the effect of the investment programme on production and income in the basic sectors, industry, agriculture, and public and private building, during the last year of the initial programme. In order to obtain the total income in the above-mentioned year, it is necessary to add the estimates of growth of private and state services. It will then be possible to establish these compatibilities, the most important of which are:

a) The compatibility between the basic sectors and other activities. It will be necessary to determine if the projected expansion of electric power, domestic production and imports is proportionate with the growth of the production of goods, the development of services and the displacement of labour from rural to urban areas, and the development of transport. In connexion with transport it must be ascertained whether the new investments for replacing material and extending existing network correspond to the growth of the other activities. Undoubtedly, investments in these sectors were planned on the basis of the estimated rate of growth referred to above, but concrete data for the probable results of the initial programme will have now become available to make these verifications. It will also be necessary to determine whether these investments are sufficient to meet energy and transport requirements in the first years after the close of the initial programme, in view of the extent of these investments and the anticipation with which they must be made.

b) Compatibility between the growth of real income, the form of development of direct and indirect demand for imports, and available foreign resources with which to cover such imports.

The development of the programme may affect imports in three ways: firstly, the effect on imports of capital goods foreseen by the programme; secondly, on imports to replace existing capital goods; and, thirdly, on imports of capital goods required for the development of production and on direct imports of manufactured consumer goods. In estimating the investments for the programme, the part of capital goods provided by imports and domestic ~~production must have been determined so that it will be sufficient to consider~~ the other two points. Reference has already been made to the import requirements for replacing equipment in the basic sectors, to which must be added industrial and agricultural machinery.

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There is little data concerning such goods in Latin America, so that samples will have to be taken in order to ascertain approximate requirements. For the reasons indicated in Chapter III, it will also be necessary to distinguish between requirements for replacements caused by the absolute uselessness of existing equipment and others which, despite the satisfactory service still being rendered by the equipment, the entrepreneurs consider should be replaced.

The results obtained by the different projects of the programme affecting raw materials and other producer goods, apart from capital goods, must be examined. Some may tend to reduce imports since they were directed to increasing domestic production thereof; others entail the increase of imports because the increase of production established by the programme calls for foreign raw materials and fuel. A similar investigation will then have to be carried out with regard to the effects of industrial expansion and the growth of private economic activities.

This is one of the aspects of the programme for which better statistical data are available, since import data generally cover a sufficiently long period of time to enable an analysis to be made of the tendencies and they also make possible some very careful extrapolations, without losing sight of the above-mentioned results. A very limited number of goods embrace a considerable proportion of imports so that individual analyses of these would be advisable. In order to avoid useless details, the remaining goods could be grouped to facilitate their study. A tentative analysis along these lines, though only a rough estimate, was made for several countries in the Economic Survey of 1949.

Imports of consumer goods could be studied in the same way. Some of these imports will be replaced by substitutive production and others will increase owing to their high income elasticity of demand.

For the same reasons advanced in other cases, the analysis of the probable growth of imports should not be limited to the final year of the initial programme, but should be extended to the years immediately following, as should also be done with the analysis of the other data required in order to outline the probable structure of the Balance of Payments.

/Further to the

Further to the estimate of imports, the calculation of the magnitude of financial services for existing foreign investments and those included in the programme will have to be made together with that of other debits. It will also be necessary to make a careful estimate of the probable development of exports which, together with other credits and the estimated foreign investments during this period, will complete the picture.

It will thus be possible to ascertain whether the expansion of imports and services brought about by the process of development is compatible with the country's foreign resources and if the aim of suppressing disequilibrium or preventing its occurrence has been achieved by the adoption of the programme. If disequilibrium occurs or cannot be dispelled during this period, it will be necessary to revise the whole programme in order to determine the best means of combating it. Several alternatives suggest themselves. It might be possible to limit imports of certain consumer goods further, either by suppressing them altogether or by stimulating a greater substitution. This increased substitution will call for greater investments in industry or agriculture which could only be met by increasing foreign or domestic investments, if the latter were possible. It might be also possible to limit certain investments of domestic origin, such as public works or construction, which, though useful, cannot replace imports and they should be substituted by other investments which replace imports. Certain investments designed to develop existing domestic production may be used to increase substitutive production, since it is generally preferable that domestic maladjustment prevail rather than foreign disequilibrium. If none of these solutions are possible, the elimination of disequilibrium can only be achieved by moderating the rate of development, thereby limiting demand for imports. This is sufficient to emphasize the need of making a greater effort to obtain additional investments rather than reach this extreme.

Recourse to new foreign loans might also be had in order to cover a part of the increased imports caused by economic development. This is not advisable, because it implies making foreign capital pay for a part

of domestic consumption. Rather than increase consumption by this means, and complete the initial programme without having fulfilled one of its main objectives, it would be preferable to invest this additional capital in intensifying the substitution of imports, or the obtaining of a higher rate of expansion of exports, if this were possible.

c) Compatibility between the increment of demand for agricultural products and the development of production. In this case, it will also be necessary to resort to consumption statistics of the principal products, over a sufficiently long period, and to make several extrapolations in order to compare the results with the probable development of production, taking into account the direct and indirect effects of the programme. Among these, reference should be made to the changes brought about in certain types of consumption by the displacement of labour from rural to urban areas.

In considering these incompatibilities, it must be remembered that the fact that nutritional level in a considerable number of Latin American countries is low, does not mean that it is sufficient to increase production to stimulate demand for foodstuffs. Real per capita income must also increase so that demand can expand commensurately with the degree of income elasticity of the different products. Otherwise, the increase of production beyond limits which are probably narrow, would cause a fall in prices. It is evident that if productivity has increased meanwhile, as a result of improved methods of cultivation, there should be no reason for a subsequent decrease of production; but the price decline might discourage farmers from adopting improved methods of cultivation. This shows that agricultural and industrial development must be closely correlated. Only the extensive development of industry can serve as a powerful incentive to increase agricultural production, except in the special case of export activities. This relationship will be considered in the course of the discussion on labour.

d) Compatibility between the increment of demand and the growth of other branches of domestic production, including substitutive production of imports as well as agricultural production. There are a large number of industrial products which for a long time have fully supplied domestic demand, and it is therefore not necessary to replace imports of such goods. It will not be possible, for each of these products, to examine the relation between the tendencies of demand and of production, in terms of calculated  
/investments,

investments, but it would be advisable to do this for the principal products and to study the remaining commodities in large groups, insofar as the meager data available permits. It would be more advisable to allow the price system itself to make the necessary adjustments, with the exception of the commodities stressed in the programme as a result of the difficulties hampering their production. The programme could not presume to solve all these partial maladjustments but only those which, by reason of their nature and importance, obstruct economic development and call for deliberate measures by the state in order to correct them.

e) Compatibility between development in the various activities and the availability of labour. Too much could not be undertaken in the analysis of this type of compatibility, since the unfortunate lack of statistics regarding the composition of the active population and its movements render anything more than conjectural estimates impossible.<sup>1/</sup> However, the labour difficulties existing in some countries emphasize the need to study this problem and organize a periodic gathering of statistical samples in order to obtain an approximate idea of the principal tendencies.

Meanwhile certain estimates appear essential, in order to establish compatibility of development in the various economic activities with the availability of labour. The programme calls for a definite expansion of the basic sectors, industry, public works and construction. This expansion will be brought about partly by increased productivity per man obtained in some sectors, and partly by the increase of employment. Employment in civil services and private services will also increase. Once the respective figures have been estimated, together with the total increase of employment, it will be necessary to determine to what extent this increment should be met by the vegetative growth of the labour force or by freeing labour from primary production or from seasonal occupations (where the wage level is low), or by immigration.

It will also be necessary to ascertain whether the displacement of labour from primary production is merely the result of the exodus of a part of the vegetative increase of the population, or whether it arises from mechanization or from the increase of productivity brought about by the improvement of the methods of cultivation. In the latter event the estimate of this displacement should be compatible with the part of the programme concerned with agriculture.

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<sup>1/</sup> With a view to collaborating in the solution of this problem, the International Labour Office has set up a Latin American Bureau in Sao Paulo (Brazil) which, among other tasks, has been entrusted with co-operating with Governments in establishing national employment services.

General view of the results of the programme

25. After examining the various compatibilities and correcting the inconsistencies which arise therefrom, it will be possible to obtain a general view of the results of the initial programme, comparing the year of its inception with the closing twelve-month period.

The fundamental purpose of the programme is the increase of real per capita income, in order to raise the standard of living of the population. It is not sufficient to establish a general comparison between the growth of the population and income, since the composition of the population may have been sharply modified during the course of the programme. Let us consider this problem in greater detail.

In Latin American countries, where consumption of goods is still relatively low, it is very important to enquire how the per capita volume of available goods for consumption has increased. The increase of these goods has not the same significance as that of private or government services. It is therefore essential to determine some of the differences.

For purposes of clarity let us first consider the expansion of the value of production in basic sectors, in agriculture, in industry and in building, and establish its relationship to the increase of the gainfully employed population in these activities in order to calculate the average increase of productivity per worker. This first assessment is of considerable importance, since it gives a summary idea of one of the most important effects of the programme thus enabling a comparison to be made with other periods in that country or in other countries, and estimate its reliability. But even when the figures are acceptable, they do not indicate the increase of available goods per gainfully employed person in the activities under observation. A part of these goods has been transferred from those sectors of production to other sectors, in exchange for the services rendered by the latter; in exchange for the services rendered by private enterprise, according to the degree of growth which the latter has attained and the manner in which it has modified its structure, in accordance with the estimates of the programme, or in exchange for state services, in the measure in which the latter has intervened in increasing available goods by means of increased taxation. The following table clarifies the matter:

/Table

	Total <sup>1/</sup>			Per capita		
	Years of the Programme Initial	Final	% (+ or -)	Years of the Programme Initial	Final	% (+ or -)
a) <u>Production of goods, total and per gainfully employed person therein</u>						
<u>Volume of Production</u>	30,000	42,900	43	200	260	30
b) <u>Availability of goods and services, total and per gainfully employed person in the total of these activities</u>						
<u>Total Available Goods</u>	<u>19,500</u>	<u>24,750</u>	<u>26.9</u>	<u>130</u>	<u>150</u>	<u>15.4</u>
a) Consumption	15,000	18,150	21.0	100	110	10.0
b) Domestic investments	4,500	6,600	46.7	30	40	33.3
<u>Services</u>	<u>10,500</u>	<u>18,150</u>	<u>72.8</u>	<u>70</u>	<u>110</u>	<u>57.0</u>
a) Private enterprise	4,500	6,600	46.7	30	40	33.3
b) State	6,000	11,550	92.5	40	70	75.0
<u>Total of goods and services = income</u>	<u>30,000</u>	<u>42,900</u>	<u>43.0%</u>	<u>200</u>	<u>260</u>	<u>30%</u>

<sup>1/</sup> Assuming an annual increase of 2 per cent for the population and a period of five years for the programme.

It should be noted that despite a 30 per cent increase in productivity per gainfully employed person (200 to 260), available goods have only increased 15.4 per cent (130 and 150), since a considerable part of the increased productivity was absorbed by services. Thus, whereas at the outset of the programme each gainfully employed person accounted for 70 of services, this now amounts to 110, that is, an increase of 57 per cent. This implies that employment and income has increased more intensely in the sector of services than for the production of goods, absorbing a part of the increment of available goods which would otherwise have remained in the sector of production.

These results might well lead to a correction of the programme. Though the advantage of increasing the volume of services<sup>1/</sup> is not

<sup>1/</sup> It should be remembered, nevertheless, that in the under-developed countries, the expansion of services includes not only activities in which income is relatively high in private enterprise, as it is in the more advanced countries, but also in intermittent occupations with a low wage level. This reflects the abundance of labour rather than a diversification of demand resulting from the increase of productivity, as occurs in the aforesaid countries.

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disputed, it might be considered that it is of more social and economic importance to increase the volume of goods available to the population. The opposite might also take place, but at all events, before making a decision, it is necessary to ascertain its effects beforehand, as carefully as possible. In the event of selecting the former, it would be necessary to increase investments in order to draw labour from services, where little capital is required, in order to utilize it for the production of goods. Hence, a part of the expansion of certain services may be accounted for by the lack of capital with which to absorb more labour in activities where the level of productivity is relatively higher. This adjustment in the distribution of employment and in the means of obtaining the increase of income calls for a revision of the programme as a whole, in the estimates of energy, of imports, and of the other sectors included therein.

Returning to the figures in the table, it will be noted that though the increase of available goods per gainfully occupied person was equivalent to only 15.4 per cent, domestic investments increased by 33.3 per cent, whilst consumption rose only 10 per cent. This expansion of domestic investments must not be neglected, but it would have been greater if services had been increased more than production. By facilitating investments, it is possible to obtain a greater increase of income in the future, at which time it would be advisable to increase services more intensively. The order of priority in a programme not only concerns the various solutions themselves, but also the time at which such measures must be adopted.

#### Duration of the initial programme

26. It has been pointed out that the initial programme tends to solve the urgent problems and eliminate the obstacles to the orderly and intense development of a country's economy. Its duration therefore depends on what is essential in order to achieve this aim. If we are guided by the period ordinarily required to solve these difficulties, independently of a programme, it would be difficult to accomplish the task in a period of less than four years whereas the nature of these /difficulties

difficulties does not require much more than six years.

However, the duration of the programme depends not only on the order of the solutions, but also on external factors, alien to a country's inclinations. In the Latin American countries these factors are of great importance and the programme must be sufficiently flexible to adapt itself to them without foregoing any of the fundamental aims.

A programme must be based on definite theories with regard to the course of exports and the terms of trade which, if not achieved, will change the conditions on which the programme is based. If the volume of exports surpasses the level forecast, the completion of the programme may be hastened or, alternatively, it will depend to a lesser extent on foreign investment. If exports are lower, and do not increase as a result of anti-cyclical considerations, it will be necessary to postpone the accomplishment of certain projects, or carry them out more slowly. The programme must therefore have a certain degree of flexibility for its execution. It must be planned to facilitate constant readjustments. If the established aims are not constantly pursued and everything is left to improvised measures, as a result of the changes, there will be no programme and this will involve returning to the situation prevailing in the Latin American countries during the past twenty years.

The initial programme might be defined as a well concerted series of preparatory measures, designed to eliminate pressing difficulties and solve urgent problems placing the country in a position to plan a long-term programme in which the projects can be echeloned over a period of time, during which no other emergencies should arise than those provoked by unforeseeable disturbances. The development of the basic sectors could then be continued in an orderly manner, commensurate with the execution of successive projects, the general plans of which were outlined in the initial programme in order to ensure their continuity in the longer programme, according to the careful estimates of the expansion of demand. The disequilibrium of the Balance of Payments would have been eliminated and it would only be necessary to continue  
/the gradual

the gradual replacement of imports by establishing new industries or encouraging certain branches of primary production, in accordance with prior estimates of expansion requirements. This also applies to agricultural development, and that of public works and building. The degree in which mechanization is extended will depend on the progress in industrial development and in other activities. The increase of productivity will be gradual and it will be possible to estimate more closely than at present what part of the resulting increment to real income will be absorbed by consumption and which part will be absorbed by investments and, finally, what part would enable an expansion of state services to take place which would be compatible with the objectives of consumption and capitalization.

27. A more reference to these subjects shows that a regular programme of development requires the systematic organization of a series of studies and technical instruments which should be undertaken during the initial programme, becoming an integral part of that programme.

Among these, the most outstanding are:

- a) A study of the sources of energy, of non-agricultural natural resources and of the potential agricultural land.
- b) Organization and improvement of technical studies in agricultural and industrial questions, and in other economic sectors, with special reference to the problems mentioned in the final part of this chapter.
- c) The organization and improvement of statistics and economic data and of the methods of analysis, in order to facilitate the assessment of the effects of the programme on economic development and to estimate requirements for future development.
- d) The training of economists to collaborate in the preparation and in the carrying out of a programme of economic development.

The Economic and Social Council of the United Nations <sup>1/</sup> recently took important decisions on the first two points under (a). The third part of (a) together with the other clauses, will be considered in the remaining part of this chapter.

## III. COMPLEMENTARY TECHNICAL ACTION IN A PROGRAMME

Directing technical investigation in countries of scanty capital availabilities

28. One of the most important features of economic development in the Latin American countries is the technical co-operation which is being offered to them, both in the preparation of special projects and in the planning of general programmes of economic development. It is acknowledged that however valuable such cooperation may be at a given moment, its scope is somewhat limited by the time factor. Experts are sent to countries which request them, where they do their work temporarily and thus complete their mission. In carrying out this work, in their manner of confronting practical problems and in the solutions which they propose, they will have stimulated local experts to follow new trends and adopt methods with which they were not familiar. These experts will have perhaps left behind a considerable portion of their experience. But that is the sum total of their practical action.

The problems of economic development in the Latin American countries demand much wider co-operation. It has already been suggested that the mere transfer of capital equipment from the more advanced countries, is not the best manner of extending modern technique to the under-developed countries. The technical progress of the former, and especially of the United States, tends principally to effect a reduction of labour consumption per unit of capital, whereas from the point of view of the Latin American countries in general, it would be wiser to direct technical research to increasing production per unit of capital.

The economists can do no more than present the problems. It is up to the technical researcher to determine the extent to which it can be solved, by making use of scientific and technical data gathered in the more advanced countries, in order to ascertain the technical methods which are best adapted to countries with a shortage of capital and a relative abundance of labour.

Agricultural technique offers an example of what might be expected in other fields of production, if technical investigation were carried out along these lines. In this case the shortage of land, or rather its

/limitations,

limitations have led to solutions which, since they also involve capital goods, would have far-reaching results in the under-developed countries. Whereas mechanization has enabled a considerable reduction to be made in the amount of labour required to cultivate a unit of land, the improvement of methods of cultivation has increased the yield per unit of land. This increased yield has sometimes been achieved by means of a relatively small capital investment for purposes of scientific investigation and the general spreading of the information obtained.

This improvement in the methods of cultivation calls for systematic action, continuity of effort and persistence of purpose, both in the early period of scientific investigation and in the technical field. It is probably of greater immediate importance than mechanization in many of the Latin American countries, where it is more important to increase production of foodstuffs than to reduce labour consumption. Mechanization does not require the same type of systematic action and its introduction is not confronted with serious difficulties. It is therefore not surprising that in many cases the stress has been laid on mechanization, when the increase of production was more vital from the standpoint of economic development.

It is evident that the problem of soil productivity is different from the increase of productivity obtained per unit of capital by means of specialized technical research. This problem is merely referred to in order to illustrate the nature of the problems encountered in under-developed countries. It is necessary to make savings in the scarcer factor in order to increase its productivity.

There is still another aspect which illustrates this problem, in addition to what has already been said regarding industrial equipment. Evidently, a country in which there is a relative shortage of labour and a higher wage level, together with a relative abundance of capital, will seek new transport equipment with which to increase the speed and therefore shorten the duration of work at the expense of increasing the cost per unit of equipment. This calls for increased investments in highways. In the under-developed countries, it would be preferable to reduce capital investment in the transport of a definite load, even when the time required for the transport and the labour per unit transported are not reduced, or

/when a smaller

when a smaller reduction is effected than that in the more costly equipment used in the more advanced countries.

There is another typical means of saving capital investments in transport which might occur in the Latin American countries, if well directed technical research produced positive results. The import of motor vehicles weighs heavily in the Balance of Payments in the majority of these countries. The preference is obvious for the types manufactured in the United States where the high income of the population, among other factors, accounts for the evolution of the automobile having followed a different trend from what might have occurred in countries with lower resources. It has been stated that chromium goods in certain types of cars represent about 10 per cent of the cost, according to information available. This is only one of the factors which have made it impossible to lower the cost of motor vehicles in relation to the reductions which might have been effected by the substantial progress made in productive technique. It is not only the luxury and the comfort, but also the increase of the horse-power of the motor which have greatly influenced this trend. It would be of interest to ascertain the possibilities of producing the type of motor vehicle which, without having all these advantages, that are undoubtedly attractive, would at the same time satisfy the same need but offer a considerable saving to countries which are compelled to increase imports of this means of transport without effecting investments in other types of activities. In short, from the point of view of the Latin American countries, technical development should be directed to obtaining the greatest productivity possible from the scanty factors available, both capital and soil. We have already shown how this objective can be separated from the saving of labour on the land. However, as with technical equipment, it is not a case of transference but of adaptation. Hence, the need for technical investigations to cover the whole field of Latin American production.

Together with the development of such research, it is necessary to train Latin American experts in all the specialities involving economic development where their number is insufficient to meet the growing demand for them.

/There is good reason

There is good reason to believe that technical investigation in Latin America and the training of experts to carry out programmes resulting from such investigations, must be effected on an international scale. In the first place, there is a manifest tendency for some of the larger countries to lend substantial resources of technical co-operation to the under-developed countries, and an equally strong inclination to divert part of these resources through United Nations. This justifies the belief that an idea similar to that suggested above might be introduced in this field. Secondly, both in technical investigation and training, the results will improve in a measure with the extension of the field from which experts are drawn. If this field is limited to a single country, it will not always be possible to find the most efficient experts to develop each speciality. Moreover, the concentration of resources in fundamental themes of investigation and practical action is more advantageous when effected on an international scale. Lastly, the success of this task depends upon a spirit of continuity and constancy, which can better be encountered in the international field. If such assistance were limited to a single country, once a specific technical problem has been solved, it is likely that the experts would be compelled to turn to other activities and there would thus be a useless dispersion of effort. International action would enable the experts to investigate the solution of similar problems in other countries or, alternatively, to extend the scope of their work.

#### The Training of Experts for Tasks of Economic Development

29. It has already been pointed out that in drawing up and carrying out a programme of economic development it is necessary to combine the efforts of the different experts required with those of the economists. Several ideas have been set forth as regards the training of these experts and the development of technical investigation with a view to the specific problems encountered in Latin America. Reference will now be made to the training of economists co-operating in these programmes, discussing at greater length certain notions set forth in an Annex to the first Economic Survey of Latin America, 1948.<sup>1/</sup> The same duality is encountered

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<sup>1/</sup> The Economic Development of Latin America and some of its principal problems, Economic Commission for Latin America, United Nations, Chapter I.

here. In the first place, the technical economic data obtained in the great centres must be utilized in order to formulate a theoretical interpretation of the problems of economic development in the Latin American countries and, subsequently, to train the economists who will eventually carry out the solution of the problems.

Fortunately, the task is more modest than that of training technical experts, and there are already various means of achieving it, both in the research which is being carried out by ECLA and that carried out by some eminent institutions.

It may be truthfully said that in ECLA's Research Centre the first systematic survey of the problems of Latin American economic development, was undertaken thus fulfilling one of the primary purposes for which ECLA was established. The work began by investigating and analyzing the most important events and has been followed up by the attempt to formulate a theoretical interpretation and present its principal problems. An organization established for the specific purpose of training economists in economic development would have to adopt the same methods, thus causing an unfortunate duplication of effort. It would be preferable to make use of the existing organization, which has already begun its work, strengthening it so that the experience which it has of Latin American problems may benefit the training of specialised economists in problems of economic development.

With this purpose in mind, it would be necessary to organize seminars in which the ECLA economists, together with competent directors appointed for this purpose, might dedicate a part of their time to pooling their knowledge for the purpose of training other economists. It is not intended to carry out two different tasks simultaneously, nor to alternate the daily investigation of concrete problems in which they are engaged with the methodical work of such courses. Free from the anxieties of their daily tasks, the ECLA economists can draw on their experience for a systematic knowledge of the problems of economic development. This knowledge would be the most adequate basis for the training of competent economists who could co-operate efficiently in the solution of these problems.

/These seminars



These seminars should be held regularly, according to a plan which would include the most important problems of economic development, from the discussion of the methods which it would be advisable to use in analyses to the consideration and judicious criticisms of programmes of development.

It is not intended to replace the many colleges or Faculties of Political Sciences existing in Latin American universities, nor to compete with them, but rather to co-operate with these institutions, supplement their task and work hand in hand with their graduates who, having already some experience of Latin American problems and concrete responsibility in economic planning, desire to specialize themselves in problems of development. The seminar courses envisaged would be for post-graduates and by reason of their nature, it is presumed that they would be limited to a relatively small number of persons.

Furthermore, these courses could also be attended by the economists working in international institutes and national development corporations, who are specially interested in problems of economic development. These seminars would be the ideal centre to exchange the increasing experience which is being obtained on this subject in Latin America, where common problems could be discussed and advantage could be taken of all this for the training of new economists.

This form of co-operation would be of great value to the ECLA Research Centre, since it would bring it into closer contact with the real problems of economic development in Latin America, and would extend its field of observation and enable it to fulfil its functions more adequately. In the last resort, the most promising and important field of practical action for this regional organization of United Nations lies in problems of economic development.

